

Alton Coal Development, LLC

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DAQ-2012-006873

May 8, 2012

Jon Black
Engineer
Major New Source Review Section
Utah Division of Air Quality
195 North 1950 West
Salt Lake City, UT 84114

UTAH DEPARTMENT OF
ENVIRONMENTAL QUALITY

MAY 10 2012

DIVISION OF AIR QUALITY

RE: 4th QT 2011 Report - Coal Hollow Mine
Project ID: N14047-0002

Dear Mr. Black,

Please find enclosed the Summary of PM₁₀ Data Collected at the Coal Hollow Mine, Utah during the First Quarter, 2012 prepared by Alton Coal Development, LLC.

Please do not hesitate to contact me if you have any questions. I can be reached at (435) 867-5331 or (435) 691-1551.

Sincerely,

B. Kirk Nicholes
Environmental Specialist
Alton Coal Development, LLC

14047 B2

Alton Coal Development, LLC.

Summary of PM₁₀ Data

Collected at Coal Hollow Mine, Utah

During the First Quarter, 2012

Submitted to:

Utah Division of Environmental Quality

Division of Air Quality

195 North 1950 West

Salt Lake City, Utah

Contact: Jon Black

Prepared by:

Alton Coal Development, LLC.

463 N 100W, Suite 1

Cedar City, Utah 84721

Contact: Kirk Nicholes

435.867.5331

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Alton Coal Development, Inc	
PM ₁₀ Data, 1st Quarter, 2012	

1.0 INTRODUCTION

This report summarizes measurements of Particulate Matter less than 10 microns nominal aerodynamic diameter (PM_{10}) collected and processed by Alton Coal Development, LLC, from the three monitoring stations located at the Coal Hollow Mine Facility in Alton, Utah. Monitoring for PM_{10} is a condition of the mines operating permit.

PM_{10} monitoring at the site consists of three BGI PQ200 PM_{10} monitors run by solar power. Figure 2 of this report shows the approximate locations of the monitoring locations. The BGI PQ200 monitors are EPA Reference Method monitors and are operated on the National Particulate 1-in-6 Monitoring Schedule. The data summarized herein covers the data collected during the first quarter of 2012.

2.0 SITE LOCATION

The Coal Hollow Mine is located in Kane County, Utah, approximately three miles southeast of the town of Alton, Utah. Figure I on the following page gives an overview of the site location. Specifically the Coal Hollow Mine is located in Sections 19, 20, 29, and 30 of Township 39S, Range 5W; with an approximate facility location of:

Northing: 41401699 meters

Easting: 371534 meters

Universal Transverse Mercator (UTM) Datum NAD27, Zone 12

The two monitoring locations as depicted in Figure 2, are located in positions to collect both background and maximum PM_{10} concentrations. The background monitor has a manufacturer's serial #962, therefore this monitor will be referred as monitor 962A. The compliance monitor has a manufacturer's serial #963, therefore this monitor will be referred as monitor 963B. The co-located monitor has a manufacturer's serial #964, therefore this monitor will be referred as monitor 964C. The compliance monitor and the co-located monitor coordinates are $37^{\circ} 24' 5.04''$ North Latitude, $112^{\circ} 27' 20.91''$ West Longitude, WGS84 Datum. The background monitor coordinates are $37^{\circ} 24' 21.96''$ North Latitude, $112^{\circ} 25' 59.97''$ West Longitude, WGS84 Datum.

Figure 1 - Site Location Map

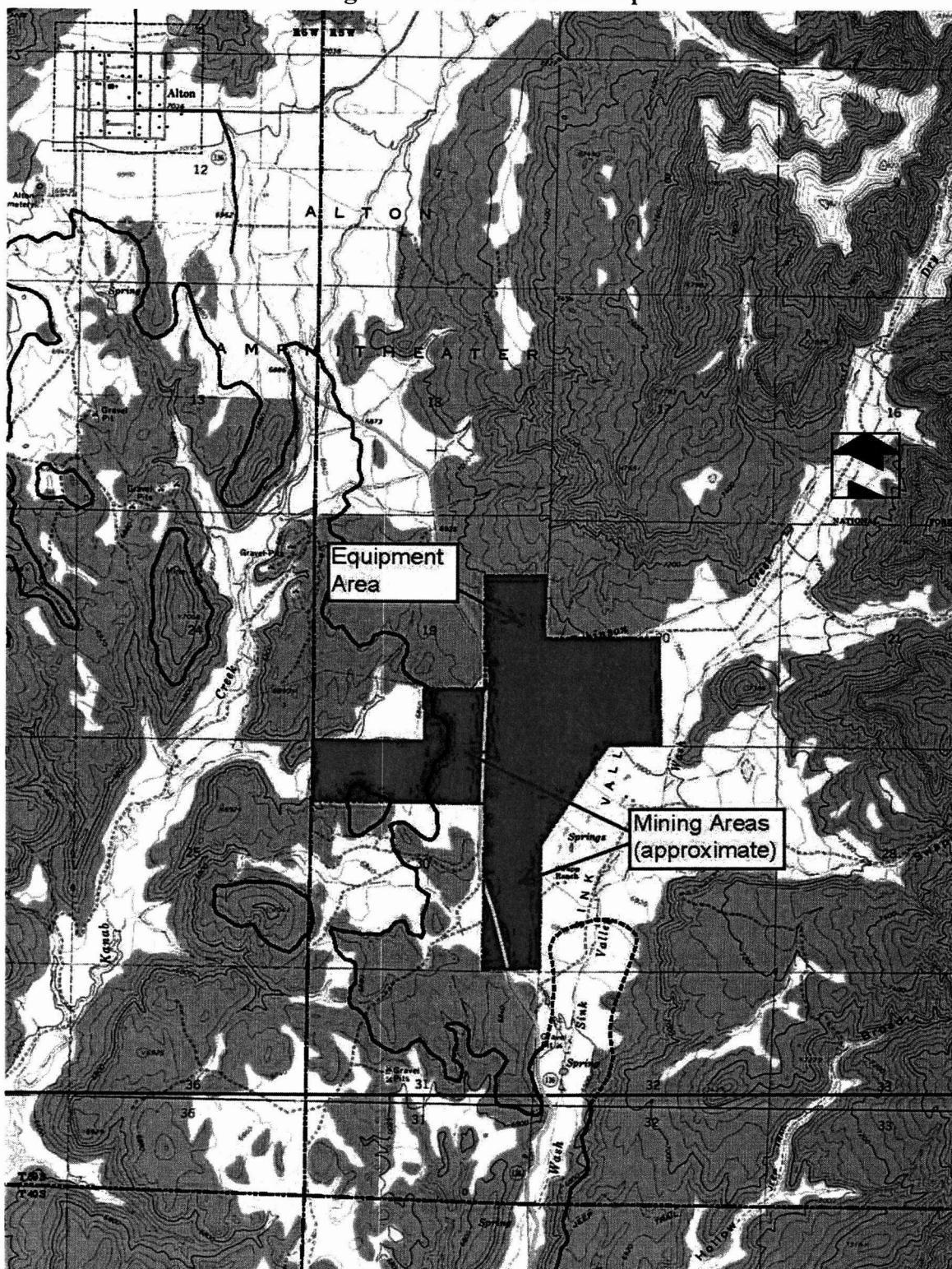


Figure 2 - Satellite View of Monitoring Locations



3.0 AIR QUALITY DATA SUMMARIES

A listing of the measured PM₁₀ concentrations for the quarter are presented in Appendix B, and Field Data Sheets generated during the collection of each sample are presented in Appendix D. Measurements were collected during a 24-hour periods and represent the average PM₁₀ concentration during the midnight to midnight data collection cycle. As required by the operating permit, duplicate measurements were made with Sampler #963B (designated as a compliance monitor) and Sampler #964C (designated as a co-located sampler). The quarterly mean PM₁₀ concentration and the comparison of measured concentrations to standards are based on measurements from the primary Sampler #963B. If a measurement from Sampler #963B was missing or invalid, the measurement from the secondary Sampler #964C was used.

The highest 24-hour mean PM₁₀ concentrations measured during the quarter from the two monitoring locations are summarized in Table I, Table II, and Table III. The three highest concentrations, # of valid samples, and the arithmetic mean concentrations from each of the sites are listed. All measured PM₁₀ concentrations were below the 24-hour National Ambient Air Quality Standard (NAAQS) of 150 µg/m³.

Table I - Summary of Measured PM₁₀ Concentrations (µg/m³)
Background Monitor - 962A

RANK	DATE	PM ₁₀ CONCENTRATION
Highest	3/28/2012	17.1
2 nd Highest	2/27/2012	12.7
Monthly Mean	1/1/12-1/31/12	4.2
Monthly Mean	2/1/12-2/29/12	5.1
Monthly Mean	3/1/12-3/31/12	8.4
Quarterly Mean	1/1/12-3/31/12 (14 valid samples)	4.6

Table II - Summary of Measured PM₁₀ Concentrations (µg/m³)
Compliance Monitor - 963B

RANK	DATE	PM ₁₀ CONCENTRATION
Highest	3/28/2012	74.5
2 nd Highest	2/27/2012	51.5
Monthly Mean	1/1/12-1/31/12	18.4
Monthly Mean	2/1/12-2/29/12	15.2
Monthly Mean	3/1/12-3/31/12	25.4
Quarterly Mean	1/1/12-3/31/12 (15 valid samples)	19.7

Table III - Summary of Measured PM₁₀ Concentrations (µg/m³)
Compliance Monitor – 964C

RANK	DATE	PM ₁₀ CONCENTRATION
Highest	3/28/2012	78.5
2 nd Highest	2/27/2012	63.4
Monthly Mean	1/1/12-1/31/12	15.8
Monthly Mean	2/1/12-2/29/12	17.8
Monthly Mean	3/1/12-3/31/12	26.1
Quarterly Mean	1/1/12-3/31/12 (15 valid samples)	19.9

Table IV – Mean Quarterly and Monthly Wind Speed

	1st Quarter 2012	January	February	March
Mean Wind Speed (m/s)	2.77	2.61	2.50	3.21

4.0 DATA RECOVERY AND QUALITY ASSURANCE

4.1 Data Recovery

Monitor 962A

Monitor 962A collected 14 of the 15 samples during the first quarter. The percent recovery for this quarter is 93.3%. The sample date for March 4, 2012 was inadvertently set for the wrong date and the monitor did not run.

Monitor 963B

Monitor 963B collected 15 of the 15 samples during the fourth quarter. The percent recovery for this quarter is 100%.

Monitor 964C

Monitor 964C collected 15 of the 15 samples during the fourth quarter. The percent recovery for this quarter is 100%.

The PM₁₀ data recoveries for the three monitoring stations are presented below:

Table V - Summary of Data Recovery

SAMPLER	POSSIBLE SAMPLES	VALID SAMPLES	PERCENT DATA RECOVERY
962A	15	14	93.3%
963B	15	15	100%
964C	15	15	100%

4.2 Quality Assurance

Quality assurance procedures utilized to verify the integrity of the measured PM₁₀ data included the following:

1. Review of PM₁₀ precision measurements based upon duplicate, collocated measurements.
2. Independent quarterly audits of the PM₁₀ samplers.
3. Monthly zero and single point flow rate checks of the PM₁₀ samplers.

4.2.1 Precision of PM₁₀ Measurements

The precision of the PM₁₀ measurements was determined from the duplicate samples collected from the collocated BGI PQ200 Monitors 963B and 964C. As recommended in *40 CFR, Part 58*, Appendix A, Section 5.3.1, PM₁₀ precision checks are reported for instances when the concentrations for duplicate samples both exceed 3 µg/m³. Duplicate samples that did not meet this condition were omitted for the purposes of the precision checks. Appendix C, of this report summarizes precision calculations between the compliance monitor and the co-located monitor. Monthly flow rate verification data is also summarized in Appendix C.

Precision calculations were developed based on 14 valid pairs of co-located monitoring data during the first quarter. Single point precision based on 40 CFR, Part 58, Appendix A Equation 10 ranged from -20.7% to 37.4% with the majority of precision values occurring in the 10% to -10% range. The aggregate coefficient of variability (CV) calculated in accordance with 40 CFR, Part 58, Appendix A Equation 11 is 15.3%. This value is above the 10% goal for aggregate CV. The value for first quarter CV was significantly impacted by the two outlier values of -20.7% and 37.4%. Additionally, the CV value is typically reviewed on an annual basis for assessment of overall measurement error. Although data from the co-located monitor (Monitor 964C) has not been required for substitute compliance information, ACD is actively investigating causes that may have an effect on the correlation of precision calculations.

4.2.2 Audit Results

The accuracy of the PM₁₀ sampler flows was verified by a performance audit conducted by Air Resource Specialist on April 11, 2012. A copy of the audit report is presented in Appendix E and is summarized in Table VI. The audit results indicate that the three samplers were operating properly.

Table VI - Audit Summary

SAMPLER	AUDIT % DIFFERENCE	LIMIT*	DESIGN % DIFFERENCE	LIMIT*
962A	0.1	±4%	0.1	± 5%
963B	0.1	±4%	0.0	± 5%
964C	-2.1	±4%	-0.2	± 5%

*Values between ± 7% and ± 10% require recalibration but no data are invalidated.

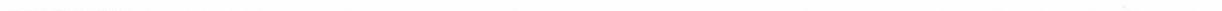
4.2.3 Zero and Single Point Flow Rate Checks

Zero and single-point flow rate verifications are performed by a site technician on a monthly basis. The data was then input into a statistical calculator to calculate percent difference and bias between each of the monitors and the monthly single point flow rate measured by a NIST traceable calibration orifice. The calculator used is called the “Data Assessment Statistical Calculator” DASC Tool. DASC was developed for the data user community and can be found in the Precision and Accuracy Reporting System within the Quality Assurance section of

EPA's Ambient Monitoring Technology Information System. This data is presented in Appendix C of this report.

APPENDIX A

Windrose



APPENDIX B

Listing of PM₁₀ Concentrations

Background Monitor 962A

Compliance Monitor 963B

Collocated Monitor 964C

APPENDIX C

Precision and Single-Point Flow Rate Checks

APPENDIX D

Field Data Sheets

APPENDIX E

Independent PM₁₀ Sampler Performance Audit Report



APPENDIX A

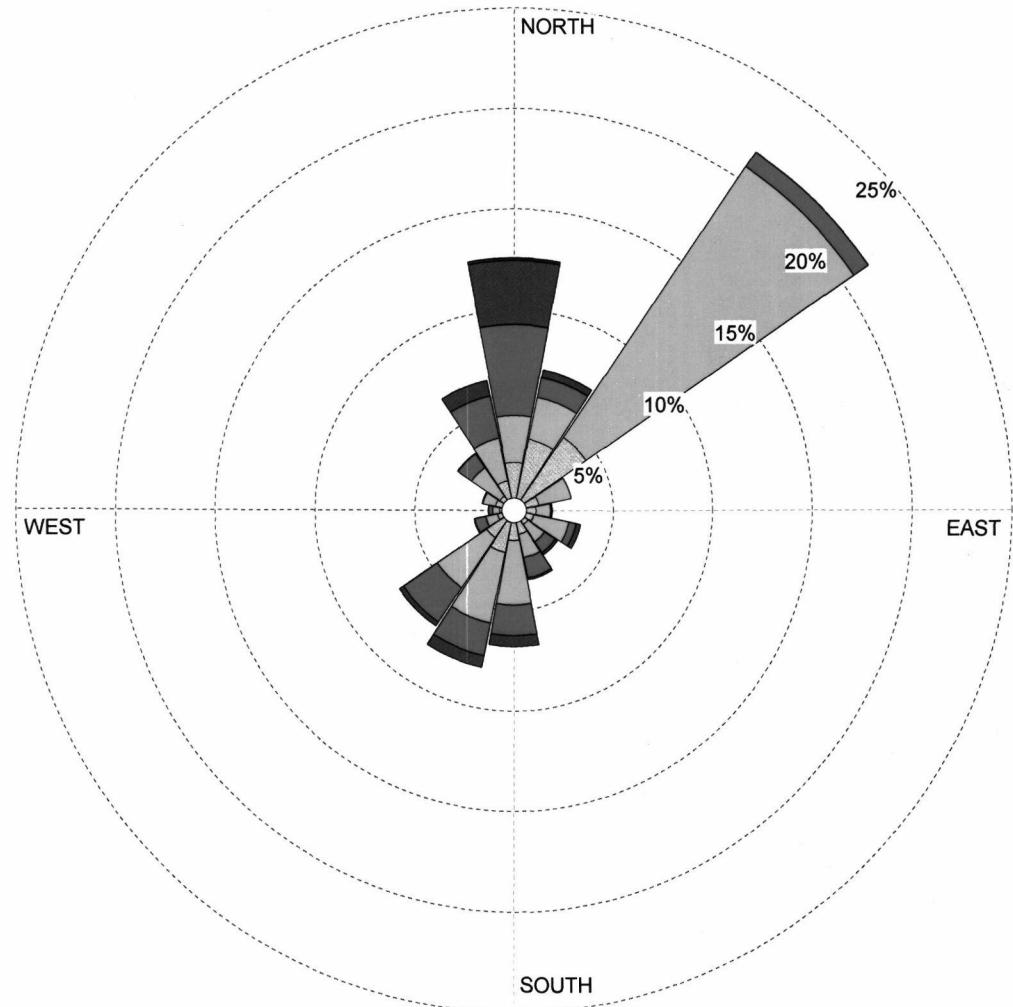
Windrose

WIND ROSE PLOT:

Alton Coal Development , Alton, Utah
2012 1st Quarter

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:	DATA PERIOD: Start Date: 1/1/2012 - 00:00 End Date: 3/31/2012 - 23:00	COMPANY NAME: Coal Hollow Mine
	MODELER: K. Nicholes	
	CALM WINDS: 7.55%	TOTAL COUNT: 2184 hrs.
	AVG. WIND SPEED: 2.77 m/s	DATE: 4/25/2012
		PROJECT NO.:



Station ID: 1
Start Date: 1/1/2012 - 00:00
End Date: 3/31/2012 - 23:00

Run ID:

Frequency Distribution
(Count)

Wind Direction (Blowing From) / Wind Speed (m/s)

	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
348.75-11.25	52	51	99	69	3	0	274
11.25-33.75	79	47	22	8	0	0	156
33.75-56.25	96	355	19	0	0	0	470
56.25-78.75	28	36	0	0	0	0	64
78.75-101.25	24	16	1	1	0	0	42
101.25-123.75	22	40	8	5	0	0	75
123.75-146.25	19	22	14	3	0	0	58
146.25-168.75	27	26	22	2	0	0	77
168.75-191.25	33	70	33	12	0	0	148
191.25-213.75	47	78	36	13	0	0	174
213.75-236.25	36	66	45	5	0	0	152
236.25-258.75	19	13	12	1	0	0	45
258.75-281.25	16	8	4	1	0	0	29
281.25-303.75	21	14	1	0	0	0	36
303.75-326.25	19	37	18	1	0	0	75
326.25-348.75	33	47	47	17	0	0	144
Total	571	926	381	138	3	0	2184

Frequency of Calm Winds: 165
Average Wind Speed: 2.77 m/s

Station ID: 1
Start Date: 1/1/2012 - 00:00
End Date: 3/31/2012 - 23:00

Run ID:

Frequency Distribution
(Normalized)

Wind Direction (Blowing From) / Wind Speed (m/s)

	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
348.75-11.25	0.023810	0.023352	0.045330	0.031593	0.001374	0.000000	0.125458
11.25-33.75	0.036172	0.021520	0.010073	0.003663	0.000000	0.000000	0.071429
33.75-56.25	0.043956	0.162546	0.008700	0.000000	0.000000	0.000000	0.215201
56.25-78.75	0.012821	0.016484	0.000000	0.000000	0.000000	0.000000	0.029304
78.75-101.25	0.010989	0.007326	0.000458	0.000458	0.000000	0.000000	0.019231
101.25-123.75	0.010073	0.018315	0.003663	0.002289	0.000000	0.000000	0.034341
123.75-146.25	0.008700	0.010073	0.006410	0.001374	0.000000	0.000000	0.026557
146.25-168.75	0.012363	0.011905	0.010073	0.000916	0.000000	0.000000	0.035256
168.75-191.25	0.015110	0.032051	0.015110	0.005495	0.000000	0.000000	0.067766
191.25-213.75	0.021520	0.035714	0.016484	0.005952	0.000000	0.000000	0.079670
213.75-236.25	0.016484	0.030220	0.020604	0.002289	0.000000	0.000000	0.069597
236.25-258.75	0.008700	0.005952	0.005495	0.000458	0.000000	0.000000	0.020604
258.75-281.25	0.007326	0.003663	0.001832	0.000458	0.000000	0.000000	0.013278
281.25-303.75	0.009615	0.006410	0.000458	0.000000	0.000000	0.000000	0.016484
303.75-326.25	0.008700	0.016941	0.008242	0.000458	0.000000	0.000000	0.034341
326.25-348.75	0.015110	0.021520	0.021520	0.007784	0.000000	0.000000	0.065934
Total	0.261447	0.423993	0.174451	0.063187	0.001374	0.000000	0.924451

Frequency of Calm Winds: 7.55%

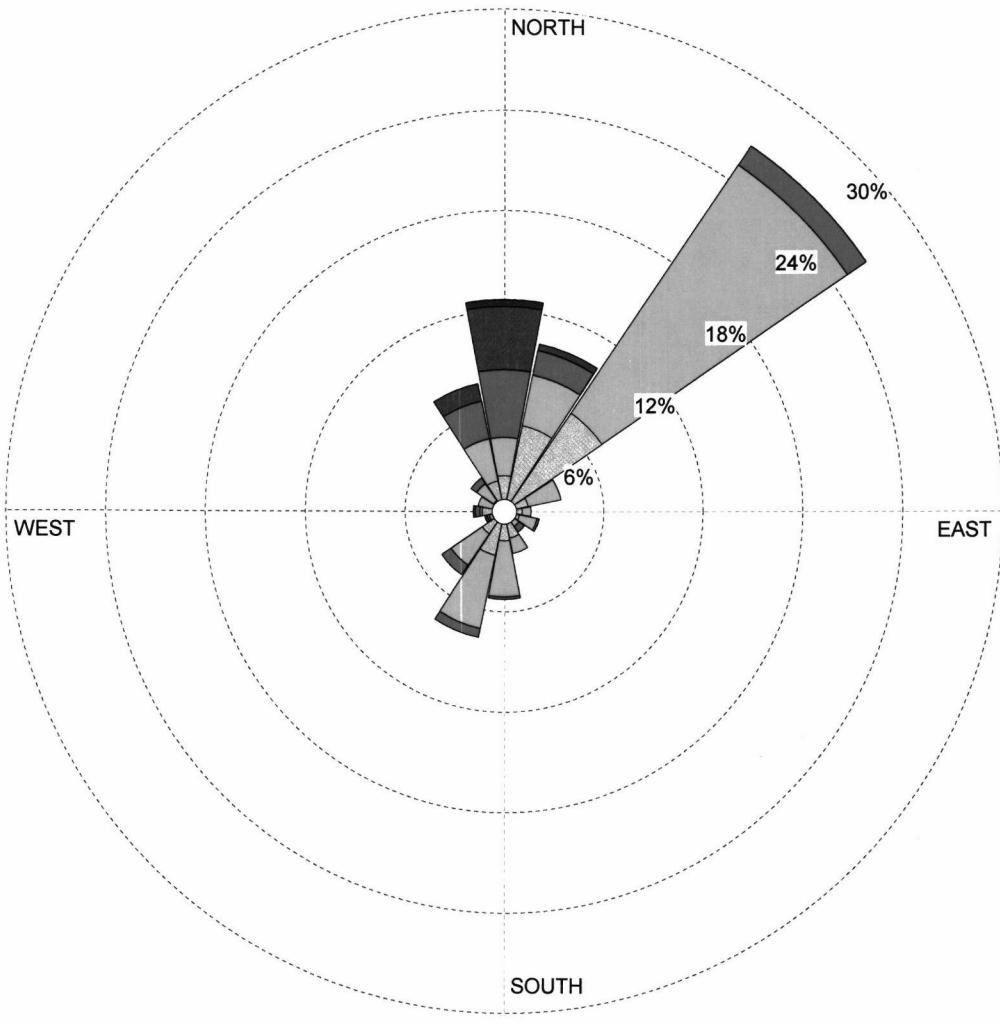
Average Wind Speed: 2.77 m/s

WIND ROSE PLOT:

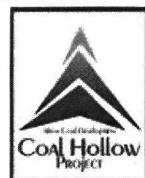
Alton Coal Development , Alton, Utah
2012 January

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:	DATA PERIOD: Start Date: 1/1/2012 - 00:00 End Date: 1/31/2012 - 23:00	COMPANY NAME: Coal Hollow Mine
		MODELER: K. Nicholes
	CALM WINDS: 7.12%	TOTAL COUNT: 744 hrs.
	AVG. WIND SPEED: 2.61 m/s	DATE: 4/25/2012
		PROJECT NO.:



Station ID: 1
Start Date: 1/1/2012 - 00:00
End Date: 1/31/2012 - 23:00

Run ID:

Frequency Distribution
(Count)

Wind Direction (Blowing From) / Wind Speed (m/s)

	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
348.75-11.25	16	17	30	28	3	0	94
11.25-33.75	39	23	11	3	0	0	76
33.75-56.25	53	133	10	0	0	0	196
56.25-78.75	11	15	0	0	0	0	26
78.75-101.25	8	4	0	0	0	0	12
101.25-123.75	7	8	1	0	0	0	16
123.75-146.25	5	3	3	0	0	0	11
146.25-168.75	12	7	0	0	0	0	19
168.75-191.25	13	25	1	0	0	0	39
191.25-213.75	20	33	4	0	0	0	57
213.75-236.25	12	17	5	0	0	0	34
236.25-258.75	5	2	1	1	0	0	9
258.75-281.25	10	1	2	1	0	0	14
281.25-303.75	4	8	0	0	0	0	12
303.75-326.25	6	9	3	0	0	0	18
326.25-348.75	14	19	17	8	0	0	58
Total	235	324	88	41	3	0	744

Frequency of Calm Winds: 53

Average Wind Speed: 2.61 m/s

Station ID: 1
Start Date: 1/1/2012 - 00:00
End Date: 1/31/2012 - 23:00

Run ID:

Frequency Distribution
(Normalized)

Wind Direction (Blowing From) / Wind Speed (m/s)

	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
348.75-11.25	0.021505	0.022849	0.040323	0.037634	0.004032	0.000000	0.126344
11.25-33.75	0.052419	0.030914	0.014785	0.004032	0.000000	0.000000	0.102151
33.75-56.25	0.071237	0.178763	0.013441	0.000000	0.000000	0.000000	0.263441
56.25-78.75	0.014785	0.020161	0.000000	0.000000	0.000000	0.000000	0.034946
78.75-101.25	0.010753	0.005376	0.000000	0.000000	0.000000	0.000000	0.016129
101.25-123.75	0.009409	0.010753	0.001344	0.000000	0.000000	0.000000	0.021505
123.75-146.25	0.006720	0.004032	0.004032	0.000000	0.000000	0.000000	0.014785
146.25-168.75	0.016129	0.009409	0.000000	0.000000	0.000000	0.000000	0.025538
168.75-191.25	0.017473	0.033602	0.001344	0.000000	0.000000	0.000000	0.052419
191.25-213.75	0.026882	0.044355	0.005376	0.000000	0.000000	0.000000	0.076613
213.75-236.25	0.016129	0.022849	0.006720	0.000000	0.000000	0.000000	0.045699
236.25-258.75	0.006720	0.002688	0.001344	0.001344	0.000000	0.000000	0.012097
258.75-281.25	0.013441	0.001344	0.002688	0.001344	0.000000	0.000000	0.018817
281.25-303.75	0.005376	0.010753	0.000000	0.000000	0.000000	0.000000	0.016129
303.75-326.25	0.008065	0.012097	0.004032	0.000000	0.000000	0.000000	0.024194
326.25-348.75	0.018817	0.025538	0.022849	0.010753	0.000000	0.000000	0.077957
Total	0.315860	0.435484	0.118280	0.055108	0.004032	0.000000	0.928763

Frequency of Calm Winds: 7.12%

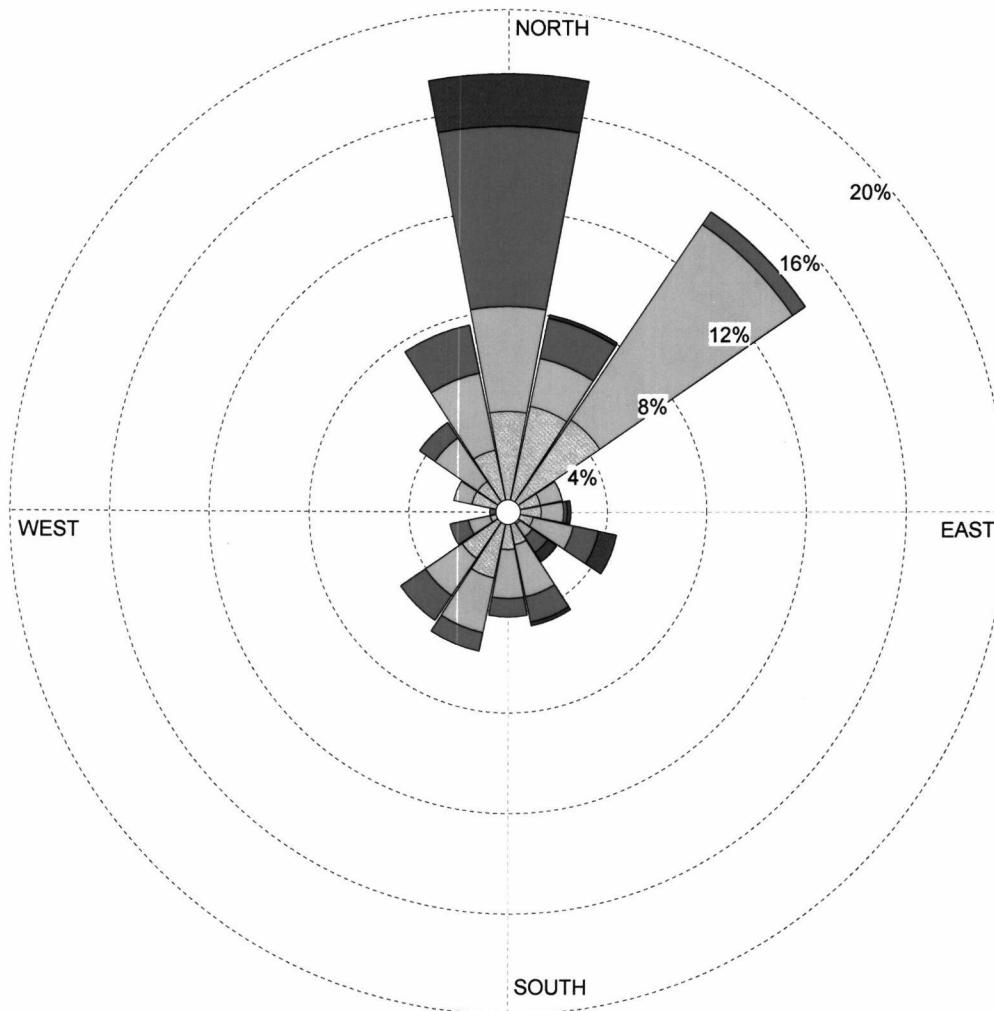
Average Wind Speed: 2.61 m/s

WIND ROSE PLOT:

Alton Coal Development , Alton, Utah
2012 February

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:	DATA PERIOD:	COMPANY NAME:	
	Start Date: 2/1/2012 - 00:00	Coal Hollow Mine	
	End Date: 2/28/2012 - 23:00	K. Nicholes	
	CALM WINDS: 11.61%	TOTAL COUNT: 672 hrs.	
	Avg. Wind Speed: 2.50 m/s	DATE: 4/25/2012	PROJECT NO.:

Station ID: 1
Start Date: 2/1/2012 - 00:00
End Date: 2/28/2012 - 23:00

Run ID:

Frequency Distribution
(Count)

Wind Direction (Blowing From) / Wind Speed (m/s)

	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
348.75-11.25	27	28	48	14	0	0	117
11.25-33.75	29	13	11	1	0	0	54
33.75-56.25	30	63	4	0	0	0	97
56.25-78.75	9	6	0	0	0	0	15
78.75-101.25	9	6	1	1	0	0	17
101.25-123.75	7	11	7	5	0	0	30
123.75-146.25	4	4	5	3	0	0	16
146.25-168.75	9	14	7	1	0	0	31
168.75-191.25	10	13	5	0	0	0	28
191.25-213.75	18	15	5	0	0	0	38
213.75-236.25	15	12	8	0	0	0	35
236.25-258.75	5	6	5	0	0	0	16
258.75-281.25	2	1	2	0	0	0	5
281.25-303.75	10	5	0	0	0	0	15
303.75-326.25	10	14	5	0	0	0	29
326.25-348.75	17	21	13	0	0	0	51
Total	211	232	126	25	0	0	672

Frequency of Calm Winds: 78
Average Wind Speed: 2.50 m/s

Station ID: 1
Start Date: 2/1/2012 - 00:00
End Date: 2/28/2012 - 23:00

Run ID:

Frequency Distribution
(Normalized)

Wind Direction (Blowing From) / Wind Speed (m/s)

	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
348.75-11.25	0.040179	0.041667	0.071429	0.020833	0.000000	0.000000	0.174107
11.25-33.75	0.043155	0.019345	0.016369	0.001488	0.000000	0.000000	0.080357
33.75-56.25	0.044643	0.093750	0.005952	0.000000	0.000000	0.000000	0.144345
56.25-78.75	0.013393	0.008929	0.000000	0.000000	0.000000	0.000000	0.022321
78.75-101.25	0.013393	0.008929	0.001488	0.001488	0.000000	0.000000	0.025298
101.25-123.75	0.010417	0.016369	0.010417	0.007440	0.000000	0.000000	0.044643
123.75-146.25	0.005952	0.005952	0.007440	0.004464	0.000000	0.000000	0.023810
146.25-168.75	0.013393	0.020833	0.010417	0.001488	0.000000	0.000000	0.046131
168.75-191.25	0.014881	0.019345	0.007440	0.000000	0.000000	0.000000	0.041667
191.25-213.75	0.026786	0.022321	0.007440	0.000000	0.000000	0.000000	0.056548
213.75-236.25	0.022321	0.017857	0.011905	0.000000	0.000000	0.000000	0.052083
236.25-258.75	0.007440	0.008929	0.007440	0.000000	0.000000	0.000000	0.023810
258.75-281.25	0.002976	0.001488	0.002976	0.000000	0.000000	0.000000	0.007440
281.25-303.75	0.014881	0.007440	0.000000	0.000000	0.000000	0.000000	0.022321
303.75-326.25	0.014881	0.020833	0.007440	0.000000	0.000000	0.000000	0.043155
326.25-348.75	0.025298	0.031250	0.019345	0.000000	0.000000	0.000000	0.075893
Total	0.313988	0.345238	0.187500	0.037202	0.000000	0.000000	0.883929

Frequency of Calm Winds: 11.61%

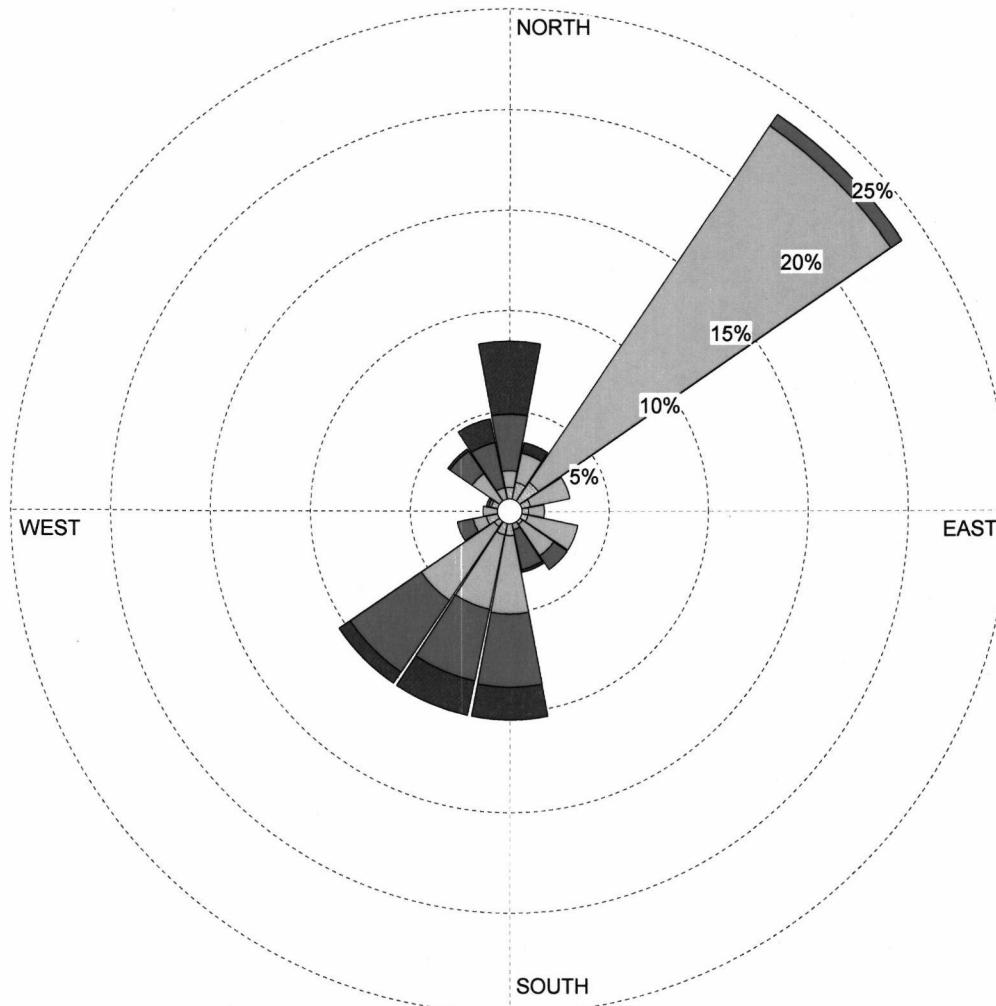
Average Wind Speed: 2.50 m/s

WIND ROSE PLOT:

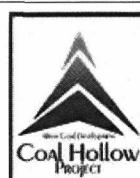
Alton Coal Development , Alton, Utah
2012 March

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:	DATA PERIOD: Start Date: 3/1/2012 - 00:00 End Date: 3/31/2012 - 23:00	COMPANY NAME: Coal Hollow Mine
	MODELER: K. Nicholes	
CALM WINDS: 4.57%	TOTAL COUNT: 744 hrs.	
AVG. WIND SPEED: 3.21 m/s	DATE: 4/25/2012	PROJECT NO.:



Station ID: 1
Start Date: 3/1/2012 - 00:00
End Date: 3/31/2012 - 23:00

Run ID:

Frequency Distribution
(Count)

Wind Direction (Blowing From) / Wind Speed (m/s)

	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
348.75-11.25	9	6	21	27	0	0	63
11.25-33.75	11	11	0	4	0	0	26
33.75-56.25	13	159	5	0	0	0	177
56.25-78.75	8	15	0	0	0	0	23
78.75-101.25	7	6	0	0	0	0	13
101.25-123.75	7	19	0	0	0	0	26
123.75-146.25	6	14	6	0	0	0	26
146.25-168.75	3	4	15	1	0	0	23
168.75-191.25	9	29	27	12	0	0	77
191.25-213.75	9	28	27	13	0	0	77
213.75-236.25	7	33	32	5	0	0	77
236.25-258.75	9	5	6	0	0	0	20
258.75-281.25	4	6	0	0	0	0	10
281.25-303.75	7	1	1	0	0	0	9
303.75-326.25	3	14	10	1	0	0	28
326.25-348.75	2	7	17	9	0	0	35
Total	114	357	167	72	0	0	744

Frequency of Calm Winds: 34

Average Wind Speed: 3.21 m/s

Station ID: 1
Start Date: 3/1/2012 - 00:00
End Date: 3/31/2012 - 23:00

Run ID:

Frequency Distribution
(Normalized)

Wind Direction (Blowing From) / Wind Speed (m/s)

	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
348.75-11.25	0.012097	0.008065	0.028226	0.036290	0.000000	0.000000	0.084677
11.25-33.75	0.014785	0.014785	0.000000	0.005376	0.000000	0.000000	0.034946
33.75-56.25	0.017473	0.213710	0.006720	0.000000	0.000000	0.000000	0.237903
56.25-78.75	0.010753	0.020161	0.000000	0.000000	0.000000	0.000000	0.030914
78.75-101.25	0.009409	0.008065	0.000000	0.000000	0.000000	0.000000	0.017473
101.25-123.75	0.009409	0.025538	0.000000	0.000000	0.000000	0.000000	0.034946
123.75-146.25	0.008065	0.018817	0.008065	0.000000	0.000000	0.000000	0.034946
146.25-168.75	0.004032	0.005376	0.020161	0.001344	0.000000	0.000000	0.030914
168.75-191.25	0.012097	0.038978	0.036290	0.016129	0.000000	0.000000	0.103495
191.25-213.75	0.012097	0.037634	0.036290	0.017473	0.000000	0.000000	0.103495
213.75-236.25	0.009409	0.044355	0.043011	0.006720	0.000000	0.000000	0.103495
236.25-258.75	0.012097	0.006720	0.008065	0.000000	0.000000	0.000000	0.026882
258.75-281.25	0.005376	0.008065	0.000000	0.000000	0.000000	0.000000	0.013441
281.25-303.75	0.009409	0.001344	0.001344	0.000000	0.000000	0.000000	0.012097
303.75-326.25	0.004032	0.018817	0.013441	0.001344	0.000000	0.000000	0.037634
326.25-348.75	0.002688	0.009409	0.022849	0.012097	0.000000	0.000000	0.047043
Total	0.153226	0.479839	0.224462	0.096774	0.000000	0.000000	0.954301

Frequency of Calm Winds: 4.57%

Average Wind Speed: 3.21 m/s

APPENDIX B

Listing of PM₁₀ Concentrations

Background Monitor 962A

PM₁₀ Sampler Summary

January 1, 2012 - March 31, 2012

Network: Alton Coal Development, LLC

Site: Coal Hollow Mine

Sampler ID: 962A

AQS ID:

Sampler Type: BGI FRM Single

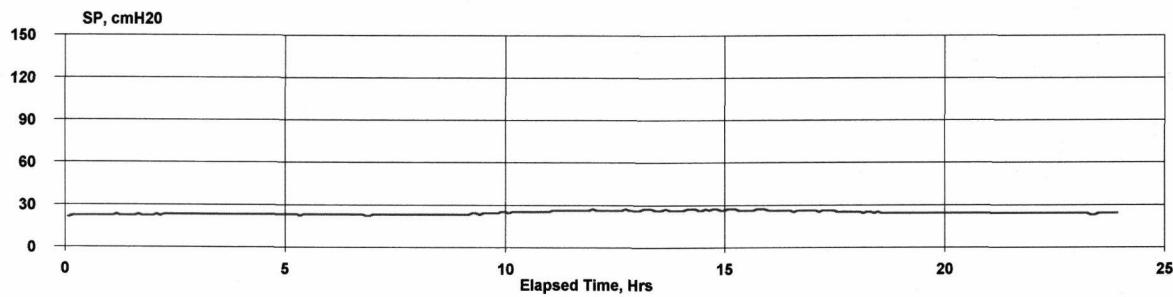
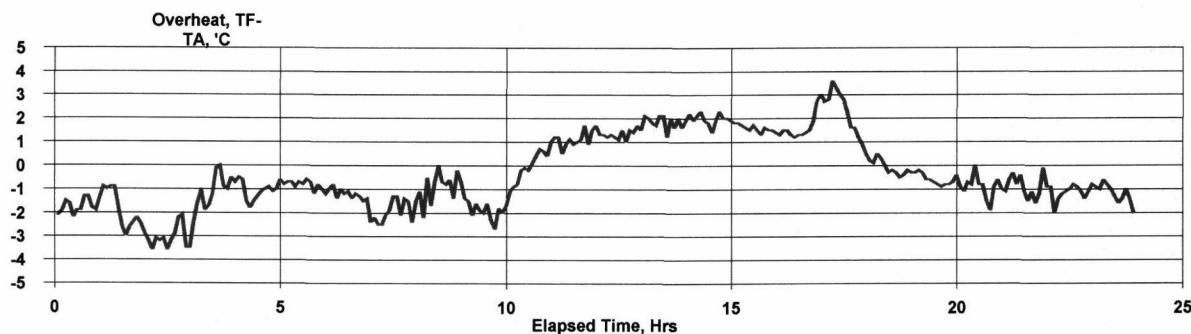
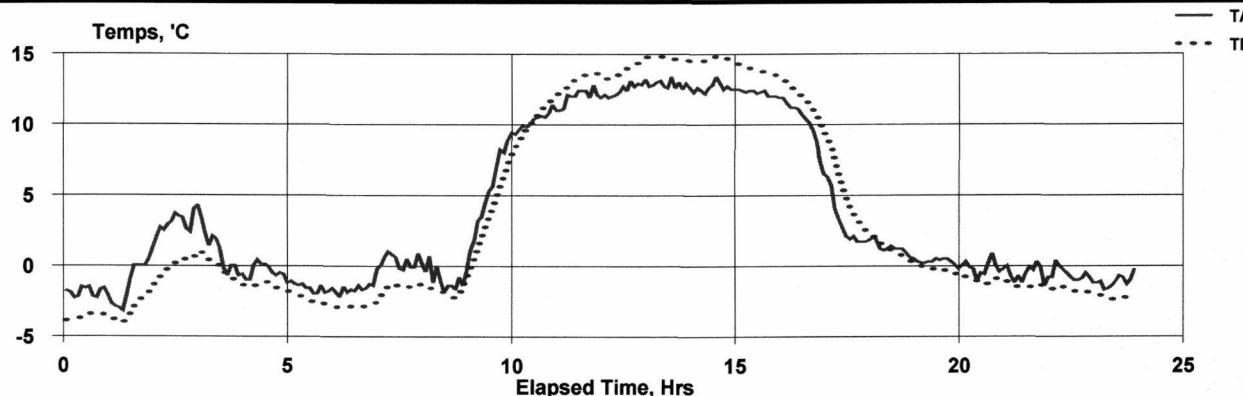
Date	Filter ID	Concentration (µg/m ³) LTP	Concentration (µg/m ³) STP	Sample Period (hr:min)	Sample Volume (m ³)	Std Volume (m ³)	Tare	Mass (mg) Gross
01/04/12	P0309505	1.4	1.7	23:59	24.0	20.2	144.178	144.212
01/10/12	P0331194	1.9	2.2	23:59	24.0	20.2	142.166	142.211
01/16/12	P0331197	9.0	10.7	23:59	24.0	20.2	138.602	138.819
01/22/12	P0331203	1.3	1.5	23:59	24.0	20.4	138.835	138.866
01/28/12	P0331200	4.0	4.7	23:59	24.0	20.7	139.926	140.023
02/03/12	P0331726	3.2	3.8	24:00	24.0	20.4	138.042	138.120
02/09/12	P0331727	1.5	1.8	23:59	24.0	20.2	140.074	140.111
02/15/12	P0332974	4.1	4.8	23:59	24.0	20.3	140.230	140.328
02/21/12	P0332977	2.0	2.3	23:59	24.0	20.3	139.126	139.173
02/27/12	P0333144	10.4	12.7	23:59	24.0	19.8	140.468	140.719
03/04/12		Invalid - AF	Invalid - AF					
03/10/12	P0333147	5.3	6.4	23:59	24.0	19.9	141.996	142.123
03/16/12	W0383634	6.5	7.9	23:59	24.0	19.7	141.067	141.222
03/22/12	W0383637	1.7	2.1	23:59	24.0	19.7	141.653	141.695
03/28/12	W0384249	14.0	17.1	23:59	24.0	19.7	144.380	144.717

# Valid	Recovery	Average	St. Dev.	Max	Min
14	93.3%	5.7	4.8	17.1	1.5

BGI PQ200 Air Sampling System

Downloaded 2012 05 Jan 12:46:18

Job Details:				Job Code: Site Name: 962A Station Code: Operators: KN User1: User2:			
Job Name: 12Jan05A.JOB Version: 5.62 Serial No: 962 Pump Time: 1263:52 Flags:							
BP	Max 594	Min 590	Avg 592	Units mmHg	Timer Information: Date dd-mmm Start: 12-04-jan		Mass Concentration Data: Filter ID: 7 Final Wt: mg Initial Wt: mg Delta Wt: 0.000 mg Total Vol: 24.036 m^3
TA	13.7	-3.4	3.6	°C	Time hh:mm:ss	0:00:08	
Q	---	---	16.7	Lpm	Stop: 12-05-jan	0:00:04	
QCV 0.51 %				ET: 23:59	Mass Conc: 0 µg/m³		
Max overheat 3.7 °C occurred 04-jan 17:14:24							
Notes 1: Notes 2:							

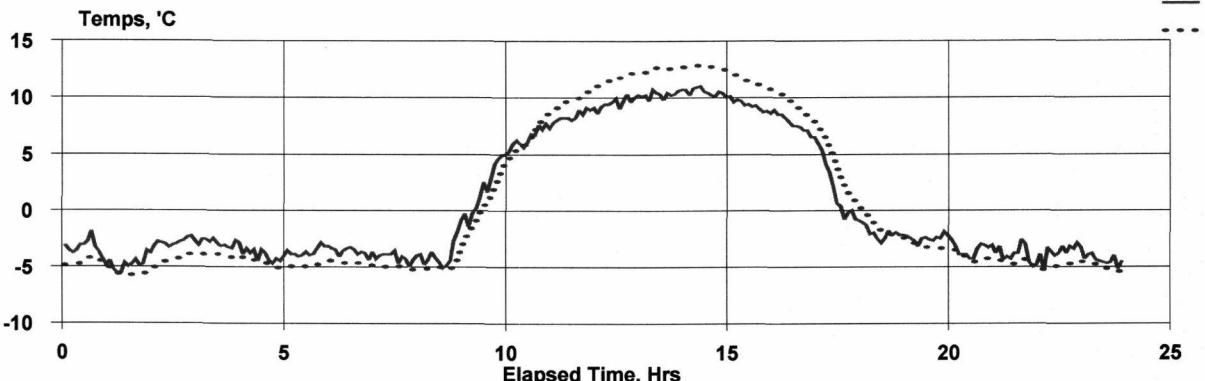
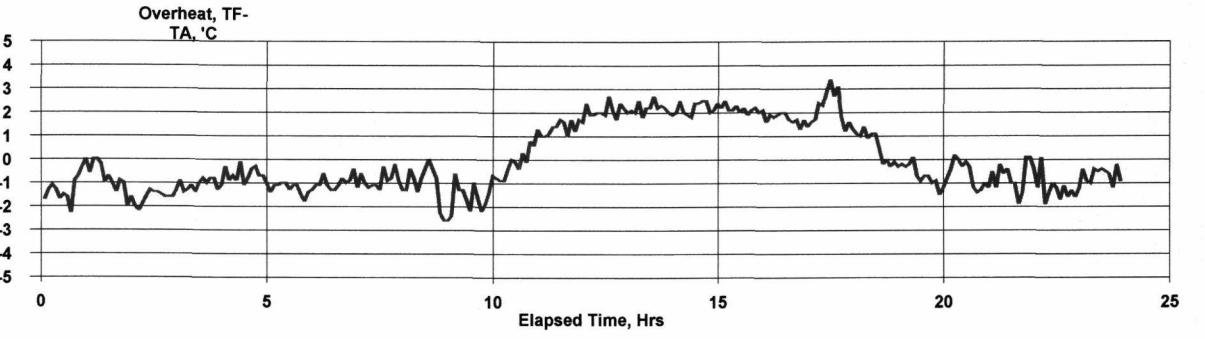
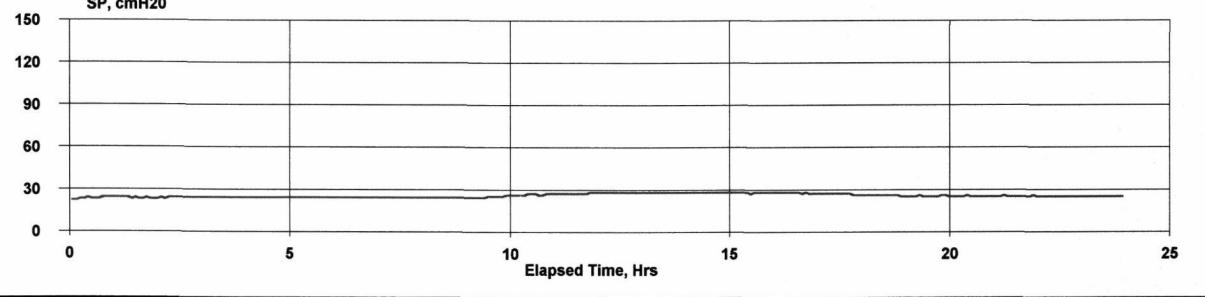


Hourly

12-04-jan	0:05:08	592	-1.9	-3.6	-1.7	22	16.71
12-04-jan	1:05:08	592	-1.1	-3.1	-2.0	22	16.71
12-04-jan	2:05:08	592	3.1	0.0	-3.1	23	16.72
12-04-jan	3:05:08	592	0.8	-0.2	-1.1	23	16.71
12-04-jan	4:05:08	592	-0.4	-1.5	-1.1	23	16.72
12-04-jan	5:05:08	592	-1.6	-2.4	-0.8	23	16.70
12-04-jan	6:05:08	593	-1.6	-2.9	-1.3	23	16.71
12-04-jan	7:05:08	593	0.3	-1.6	-1.9	23	16.72
12-04-jan	8:05:08	593	-0.9	-1.8	-0.9	23	16.72
12-04-jan	9:05:08	594	5.5	3.7	-1.9	24	16.71
12-04-jan	10:05:08	594	10.3	10.3	0.0	25	16.70
12-04-jan	11:05:08	594	12.0	13.2	1.1	26	16.70
12-04-jan	12:05:08	593	12.5	13.9	1.3	26	16.70
12-04-jan	13:05:08	593	12.8	14.7	1.8	26	16.72
12-04-jan	14:05:08	592	12.6	14.6	2.0	27	16.71
12-04-jan	15:05:08	592	12.2	13.8	1.6	27	16.72
12-04-jan	16:05:08	592	10.0	11.7	1.7	26	16.71
12-04-jan	17:05:08	593	2.9	5.1	2.2	25	16.71
12-04-jan	18:05:08	593	1.2	1.1	-0.1	24	16.71
12-04-jan	19:05:08	592	0.3	-0.3	-0.6	24	16.71
12-04-jan	20:05:08	592	-0.1	-1.1	-0.9	24	16.71
12-04-jan	21:05:08	592	-0.6	-1.5	-0.9	24	16.71
12-04-jan	22:05:08	592	-0.6	-1.8	-1.1	24	16.71
12-04-jan	23:05:08	592	-1.1	-2.3	-1.2	24	16.71

BGI PQ200 Air Sampling System

Downloaded 2012 11 jan 09:50:30

Job Details:				Job Code: Site Name: 962A Station Code: Operators: KN User1: User2:
Job Name: 12Jan11A.JOB Version: 5.62 Serial No: 962 Pump Time: 1287:51 Flags:				
BP	Max 587	Min 583	Avg 585	Units mmHg
TA	11.5	-6.3	0.5	°C
Q	---	---	16.71	Lpm
QCV 0.55 %				Timer Information:
Max overheat 3.8 °C occured 10-jan 17:31:10				Date dd-mmm Start: 12-10-jan Time hh:mm:ss Stop: 12-11-jan 0:00:04 ET: 23:59
				Mass Concentration Data: Filter ID: _____ mg Final Wt: _____ mg Initial Wt: _____ mg Delta Wt: 0.000 mg Total Vol: 24.039 m³ Mass Conc: 0 µg/m³
Notes 1: Notes 2: 				
				
				

Hourly

12-10-jan	0:05:08	587	-3.4	-4.6	-1.2	23	16.72
12-10-jan	1:05:08	587	-4.8	-5.6	-0.9	24	16.71
12-10-jan	2:05:08	587	-2.9	-4.5	-1.6	24	16.71
12-10-jan	3:05:08	587	-2.9	-4.0	-1.1	24	16.70
12-10-jan	4:05:08	586	-4.0	-4.7	-0.7	24	16.71
12-10-jan	5:05:08	586	-3.7	-4.9	-1.3	24	16.71
12-10-jan	6:05:08	586	-3.7	-4.7	-1.0	24	16.71
12-10-jan	7:05:08	586	-4.2	-5.1	-0.9	24	16.70
12-10-jan	8:05:08	586	-3.8	-5.0	-1.2	24	16.71
12-10-jan	9:05:08	586	2.1	0.5	-1.5	25	16.71
12-10-jan	10:05:08	586	6.5	6.5	0.0	27	16.73
12-10-jan	11:05:08	586	8.4	9.8	1.4	27	16.71
12-10-jan	12:05:08	585	9.6	11.7	2.1	28	16.71
12-10-jan	13:05:08	585	10.3	12.5	2.2	28	16.75
12-10-jan	14:05:08	584	10.5	12.7	2.2	28	16.70
12-10-jan	15:05:08	584	9.3	11.4	2.1	28	16.71
12-10-jan	16:05:08	584	7.6	9.4	1.7	28	16.70
12-10-jan	17:05:08	584	1.6	3.8	2.2	27	16.71
12-10-jan	18:05:08	584	-2.1	-1.6	0.5	26	16.71
12-10-jan	19:05:08	584	-2.5	-3.2	-0.7	25	16.71
12-10-jan	20:05:08	584	-3.5	-4.1	-0.7	25	16.72
12-10-jan	21:05:08	583	-4.0	-4.7	-0.7	25	16.71
12-10-jan	22:05:08	584	-3.7	-4.9	-1.3	25	16.71
12-10-jan	23:05:08	583	-4.4	-5.1	-0.6	25	16.71

BGI PQ200 Air Sampling System

Downloaded 2012 18 jan 13:33:42

Job Details:

Job Name: 12Jan18A.JOB
 Version: 5.62
 Serial No: 962
 Pump Time: 1311:50
 Flags:

Job Code:
 Site Name: 962A
 Station Code:
 Operators: KN
 User1:
 User2:

	Max	Min	Avg	Units
BP	582	577	579	mmHg
TA	2.5	-12	-3.3	°C
Q	---	---	16.71	Lpm

QCV 0.55 %

Max overheat 5.6 °C
 occurred 17-jan 18:17:18

Timer Information:

Date dd-mmm	Time hh:mm:ss
Start: 12-16-jan	0:00:08
Stop: 12-17-jan	0:00:04

ET: 23:59

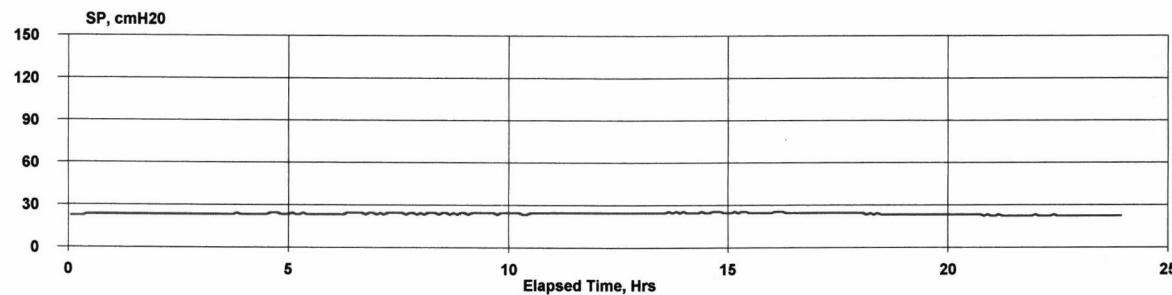
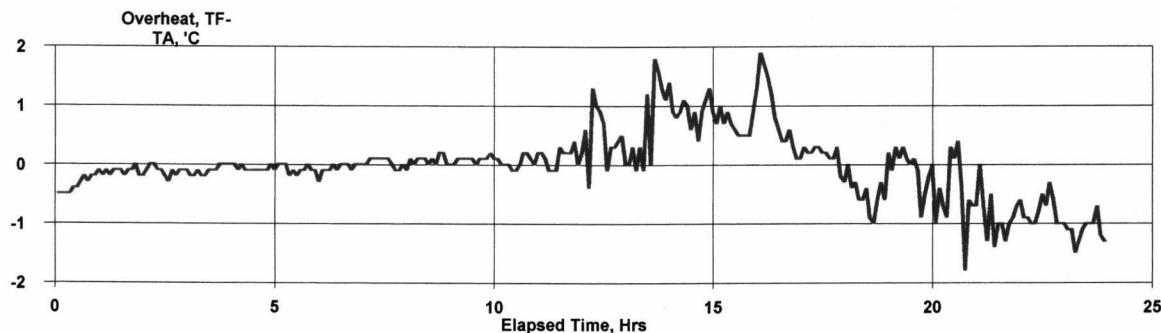
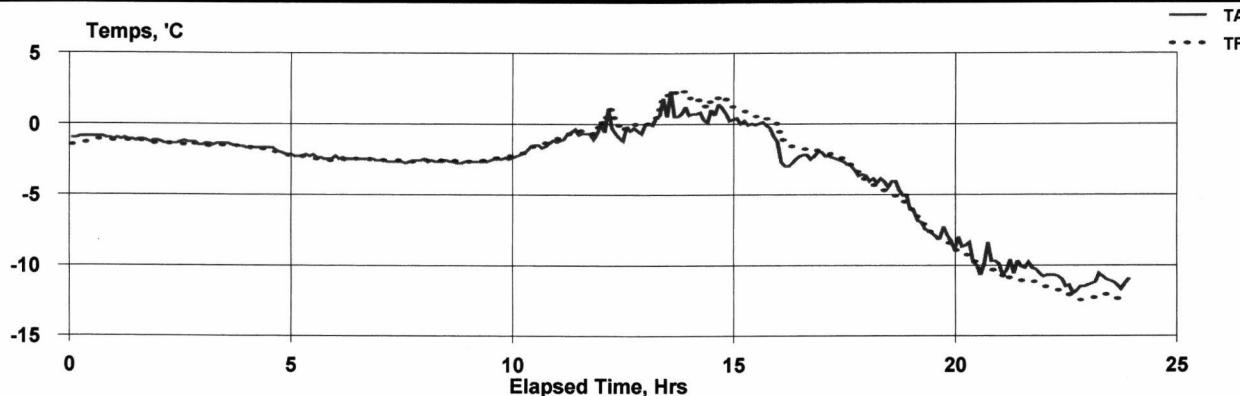
Mass Concentration Data:

Filter ID: 21	mg
Final Wt:	mg
Initial Wt:	mg
Delta Wt: 0.000	mg
Total Vol: 24.041	m^3

Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



Hourly

12-16-jan	0:05:08	580	-1.0	-1.3	-0.3	23	16.71
12-16-jan	1:05:08	579	-1.1	-1.3	-0.1	23	16.71
12-16-jan	2:05:08	579	-1.4	-1.5	-0.1	23	16.72
12-16-jan	3:05:08	578	-1.5	-1.6	-0.1	23	16.72
12-16-jan	4:05:08	578	-1.9	-1.9	-0.1	23	16.72
12-16-jan	5:05:08	578	-2.4	-2.5	-0.1	23	16.71
12-16-jan	6:05:08	578	-2.5	-2.6	0.0	24	16.71
12-16-jan	7:05:08	578	-2.7	-2.6	0.0	24	16.72
12-16-jan	8:05:08	578	-2.7	-2.6	0.1	24	16.70
12-16-jan	9:05:08	578	-2.6	-2.5	0.1	24	16.71
12-16-jan	10:05:08	578	-1.7	-1.6	0.0	24	16.72
12-16-jan	11:05:08	578	-0.7	-0.6	0.1	24	16.72
12-16-jan	12:05:08	578	-0.4	0.0	0.5	24	16.71
12-16-jan	13:05:08	578	0.8	1.5	0.7	24	16.71
12-16-jan	14:05:08	578	0.7	1.6	0.9	24	16.71
12-16-jan	15:05:08	579	-0.2	0.6	0.7	24	16.72
12-16-jan	16:05:08	579	-2.5	-1.7	0.8	24	16.72
12-16-jan	17:05:08	580	-2.9	-2.8	0.1	24	16.71
12-16-jan	18:05:08	581	-4.5	-5.0	-0.5	23	16.73
12-16-jan	19:05:08	581	-7.6	-7.7	-0.1	23	16.72
12-16-jan	20:05:08	581	-9.3	-9.9	-0.5	23	16.71
12-16-jan	21:05:08	582	-10.3	-11.1	-0.9	22	16.71
12-16-jan	22:05:08	582	-11.3	-12.1	-0.8	22	16.71
12-16-jan	23:05:08	582	-11.1	-12.3	-1.1	22	16.73

BGI PQ200 Air Sampling System

Downloaded 2012 23 jan 09:50:33

Job Details:			
Job Name: 12Jan23A.JOB Version: 5.62 Serial No: 962 Pump Time: 1335:49 Flags:		Job Code: Site Name: 962A Station Code: Operators: KN User1: User2:	
BP	Max 584	Min 576	Avg 581 mmHg
TA	-1.2	-10.4	-5.3 °C
Q	---	---	16.71 Lpm
QCV 0.56 %		Timer Information:	
Max overheat 5.3 °C occured 22-jan 13:28:16		Date dd-mmm Start: 12-22-jan	Time hh:mm:ss Stop: 12-23-jan 0:00:05
		ET: 23:59	Mass Conc: 0 µg/m³
Notes 1: Notes 2:			
<p>Temps, °C</p> <p>Legend: TA (solid line), TF (dashed line)</p> <p>Y-axis: -15, -10, -5, 0, 5</p> <p>X-axis: 0, 5, 10, 15, 20, 25</p>			
<p>Overheat, TF - TA, °C</p> <p>Y-axis: -1, 0, 1, 2, 3, 4, 5, 6</p> <p>X-axis: 0, 5, 10, 15, 20, 25</p>			
<p>SP, cmH2O</p> <p>Y-axis: 0, 30, 60, 90, 120, 150</p> <p>X-axis: 0, 5, 10, 15, 20, 25</p>			

Hourly

12-22-jan	0:05:08	578	-4.9	-4.9	0.0	20	16.71
12-22-jan	1:05:08	578	-5.2	-5.0	0.2	21	16.70
12-22-jan	2:05:08	579	-5.8	-5.6	0.2	20	16.71
12-22-jan	3:05:08	579	-6.4	-6.4	0.0	20	16.70
12-22-jan	4:05:08	580	-7.6	-7.7	-0.1	20	16.72
12-22-jan	5:05:08	580	-7.4	-7.9	-0.5	20	16.69
12-22-jan	6:05:08	580	-7.3	-7.7	-0.3	20	16.70
12-22-jan	7:05:08	581	-7.7	-7.8	-0.1	20	16.70
12-22-jan	8:05:08	581	-8.2	-8.3	0.0	20	16.71
12-22-jan	9:05:08	582	-5.3	-4.7	0.6	21	16.71
12-22-jan	10:05:08	583	-3.3	-1.6	1.7	22	16.72
12-22-jan	11:05:08	583	-2.3	1.8	4.1	22	16.72
12-22-jan	12:05:08	582	-2.5	2.0	4.6	22	16.71
12-22-jan	13:05:08	583	-1.8	2.8	4.6	22	16.72
12-22-jan	14:05:08	583	-1.7	2.5	4.1	22	16.71
12-22-jan	15:05:08	583	-2.2	0.8	3.0	22	16.71
12-22-jan	16:05:08	583	-2.4	-0.6	1.8	22	16.72
12-22-jan	17:05:08	583	-3.2	-1.6	1.6	22	16.72
12-22-jan	18:05:08	583	-5.7	-4.2	1.5	22	16.71
12-22-jan	19:05:08	583	-7.5	-6.4	1.1	21	16.73
12-22-jan	20:05:08	583	-8.3	-7.6	0.7	21	16.72
12-22-jan	21:05:08	583	-7.9	-8.0	-0.1	21	16.71
12-22-jan	22:05:08	583	-6.6	-6.9	-0.4	21	16.71
12-22-jan	23:05:08	583	-6.6	-6.5	0.1	21	16.71

BGI PQ200 Air Sampling System

Downloaded 2012 30 jan 10:27:33

Job Details:

Job Name: 12Jan30A.JOB
 Version: 5.62
 Serial No: 962
 Pump Time: 1359:48
 Flags:

Job Code:
 Site Name: 962A
 Station Code:
 Operators: KN
 User1:
 User2:

	Max	Min	Avg	Units
BP	591	587	589	mmHg
TA	6.6	-16.8	-4.8	°C
Q	---	---	16.71	Lpm

QCV 0.42 %

Max overheat 4.1 °C
 occurred 28-jan 13:51:46

Timer Information:

Date Time
 dd-mmm hh:mm:ss
 Start: 12-28-jan 0:00:08
 Stop: 12-29-jan 0:00:05
 ET: 23:59

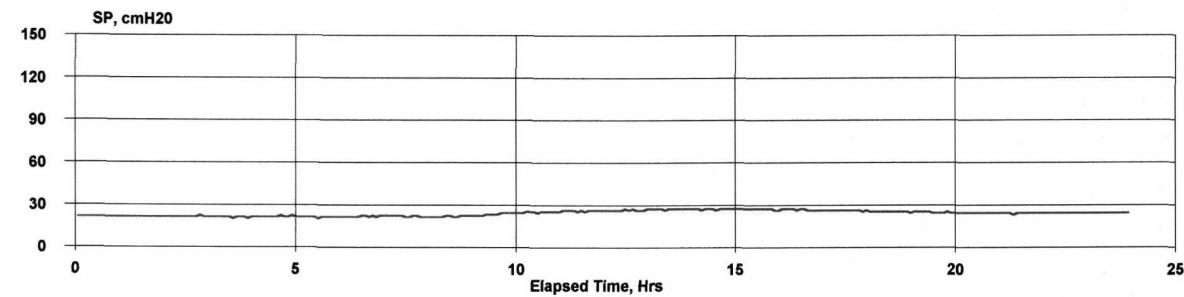
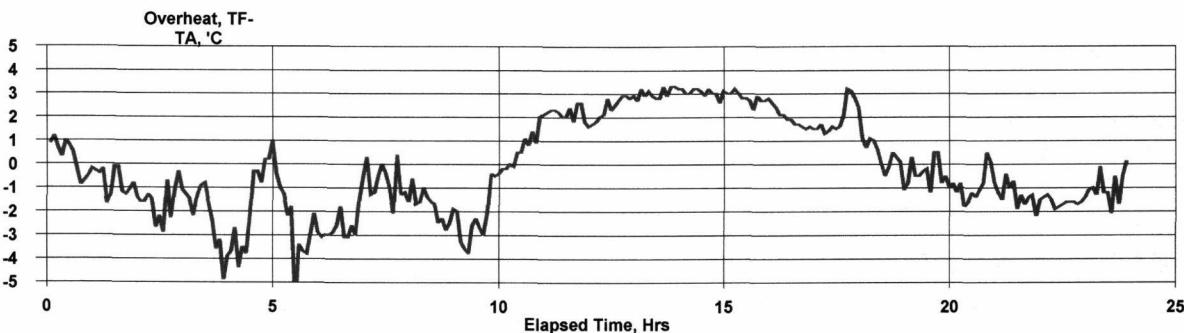
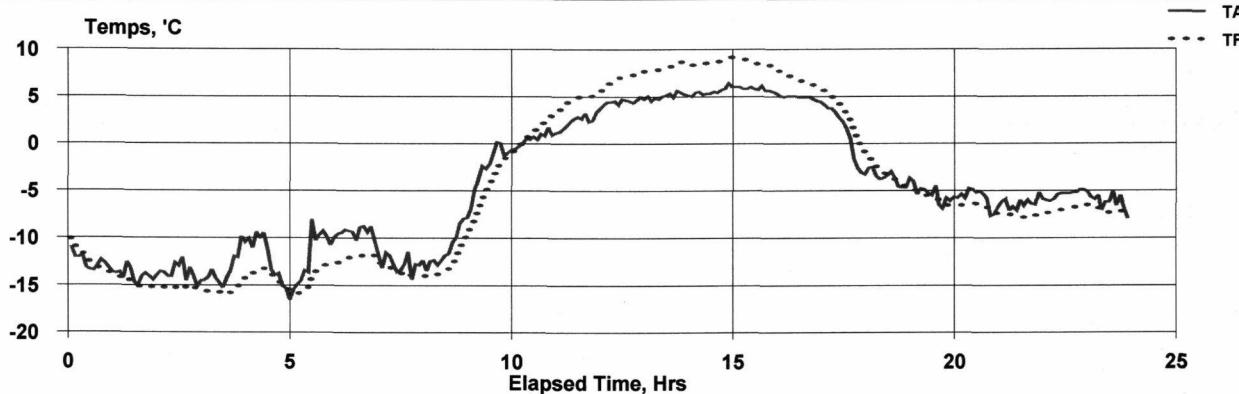
Mass Concentration Data:

Filter ID: 24
 Final Wt: mg
 Initial Wt: mg
 Delta Wt: 0.000 mg
 Total Vol: 24.036 m^3

Mass Conc: 0 µg/m3

Notes 1:

Notes 2:



Hourly

12-28-jan	0:05:08	588	-12.7	-12.5	0.2	21	16.70
12-28-jan	1:05:08	588	-14.0	-14.8	-0.8	21	16.70
12-28-jan	2:05:08	588	-13.8	-15.4	-1.6	21	16.71
12-28-jan	3:05:08	588	-13.2	-15.5	-2.3	21	16.72
12-28-jan	4:05:08	588	-12.5	-14.2	-1.7	21	16.71
12-28-jan	5:05:08	588	-11.7	-14.4	-2.7	21	16.72
12-28-jan	6:05:08	589	-9.6	-12.1	-2.5	21	16.71
12-28-jan	7:05:08	589	-12.8	-13.6	-0.8	22	16.71
12-28-jan	8:05:08	590	-11.0	-12.8	-1.8	22	16.71
12-28-jan	9:05:08	590	-2.3	-4.5	-2.2	23	16.72
12-28-jan	10:05:08	591	0.6	1.3	0.7	25	16.70
12-28-jan	11:05:08	591	2.5	4.6	2.2	26	16.71
12-28-jan	12:05:08	591	4.5	6.9	2.5	26	16.72
12-28-jan	13:05:08	591	5.1	8.1	3.0	27	16.72
12-28-jan	14:05:08	591	5.5	8.6	3.0	27	16.71
12-28-jan	15:05:08	590	5.8	8.6	2.8	27	16.72
12-28-jan	16:05:08	590	4.8	6.7	1.9	27	16.71
12-28-jan	17:05:08	590	0.9	3.0	2.0	26	16.70
12-28-jan	18:05:08	590	-3.7	-3.4	0.3	25	16.71
12-28-jan	19:05:08	590	-5.5	-5.8	-0.4	25	16.70
12-28-jan	20:05:08	591	-5.9	-6.8	-0.9	24	16.71
12-28-jan	21:05:08	591	-6.3	-7.6	-1.3	24	16.70
12-28-jan	22:05:08	591	-5.4	-7.0	-1.6	24	16.70
12-28-jan	23:05:08	591	-6.2	-7.2	-1.0	24	16.71

BGI PQ200 Air Sampling System

Downloaded 2012 06 feb 12:13:32

Job Details:

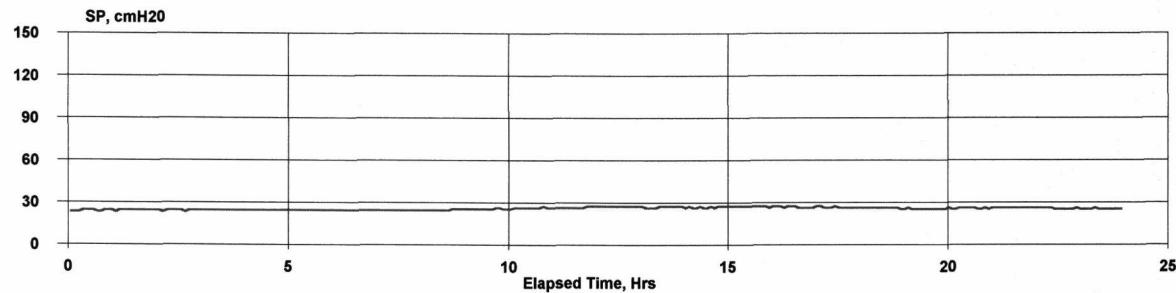
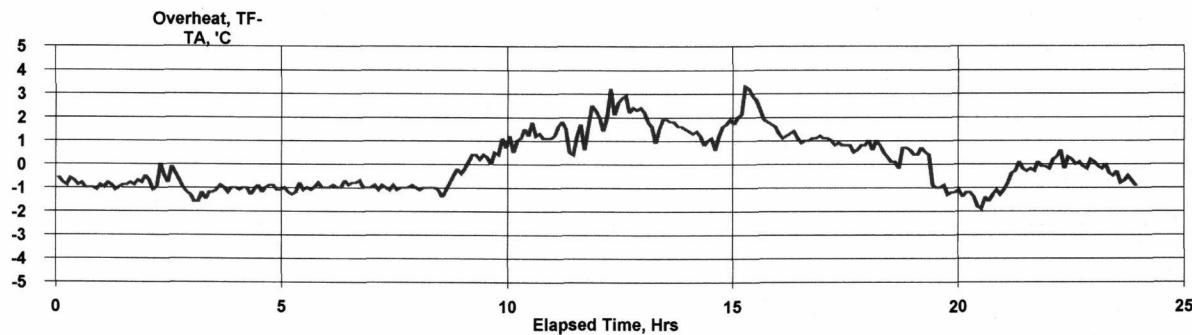
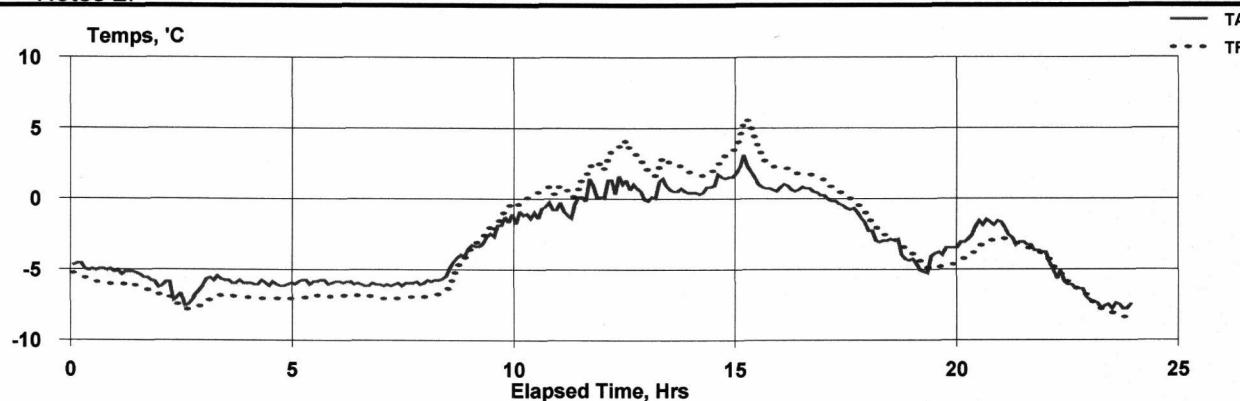
Job Name: 12Feb06A.JOB
 Version: 5.62
 Serial No: 962
 Pump Time: 1383:48
 Flags:

Job Code:
 Site Name: 962A
 Station Code:
 Operators: KN
 User1:
 User2:

	Max	Min	Avg	Units	Timer Information:		Mass Concentration Data:	
BP	585	580	583	mmHg			Filter ID:	6
TA	3.9	-8	-3.2	°C	Date	Time	Final Wt:	mg
Q	---	---	16.71	Lpm	dd-mmm	hh:mm:ss	Initial Wt:	mg
QCV		0.5 %		Start: 12-03-feb 0:00:08		Delta Wt: 0.000 mg		Total Vol: 24.037 m^3
Max overheat occurred 05-feb 21:30:22		4 °C		Stop: 12-04-feb 0:00:05		Mass Conc: 0 µg/m3		
ET: 24:00:00								

Notes 1:

Notes 2:



Hourly

12-03-feb	0:04:38	581	-5.0	-5.8	-0.9	24	16.71
12-03-feb	1:04:38	582	-5.5	-6.4	-0.9	24	16.71
12-03-feb	2:04:38	582	-6.7	-7.5	-0.7	24	16.72
12-03-feb	3:04:38	581	-5.8	-7.0	-1.2	24	16.71
12-03-feb	4:04:38	582	-6.1	-7.1	-1.1	24	16.71
12-03-feb	5:04:38	582	-5.9	-7.0	-1.0	24	16.71
12-03-feb	6:04:38	582	-6.0	-6.9	-0.9	24	16.70
12-03-feb	7:04:38	583	-6.1	-7.1	-1.0	24	16.71
12-03-feb	8:04:38	583	-5.0	-5.9	-0.9	24	16.70
12-03-feb	9:04:38	583	-2.4	-2.1	0.4	25	16.71
12-03-feb	10:04:38	583	-1.0	0.2	1.2	26	16.71
12-03-feb	11:04:38	584	-0.1	1.3	1.4	26	16.71
12-03-feb	12:04:38	583	0.8	3.2	2.4	27	16.71
12-03-feb	13:04:38	583	0.6	2.2	1.7	27	16.71
12-03-feb	14:04:38	583	1.0	2.2	1.3	27	16.71
12-03-feb	15:04:38	583	1.4	3.7	2.3	27	16.71
12-03-feb	16:04:38	584	0.6	1.8	1.1	27	16.70
12-03-feb	17:04:38	584	-0.6	0.2	0.8	26	16.72
12-03-feb	18:04:38	584	-3.2	-2.7	0.5	26	16.72
12-03-feb	19:04:38	584	-4.2	-4.7	-0.4	25	16.71
12-03-feb	20:04:38	585	-2.3	-3.7	-1.4	26	16.73
12-03-feb	21:04:38	585	-3.0	-3.3	-0.3	26	16.73
12-03-feb	22:04:38	585	-5.7	-5.6	0.1	26	16.71
12-03-feb	23:04:38	585	-7.6	-8.0	-0.4	25	16.71

BGI PQ200 Air Sampling System

Downloaded 2012 11 feb 09:00:44

Job Details:

Job Name: 12Feb11A.JOB
 Version: 5.62
 Serial No: 962
 Pump Time: 1407:47
 Flags:

Job Code:
 Site Name: 962A
 Station Code:
 Operators: KN
 User1:
 User2:

	Max	Min	Avg	Units
BP	589	586	587	mmHg
TA	9.4	-6.9	1.4	°C
Q	---	---	16.71	Lpm

QCV 0.49 %

Max overheat 7.3 °C
 occurred 10-feb 18:21:40

Timer Information:

Date dd-mmm	Time hh:mm:ss
Start: 12-09-feb	0:00:08
Stop: 12-10-feb	0:00:05
ET: 23:59	

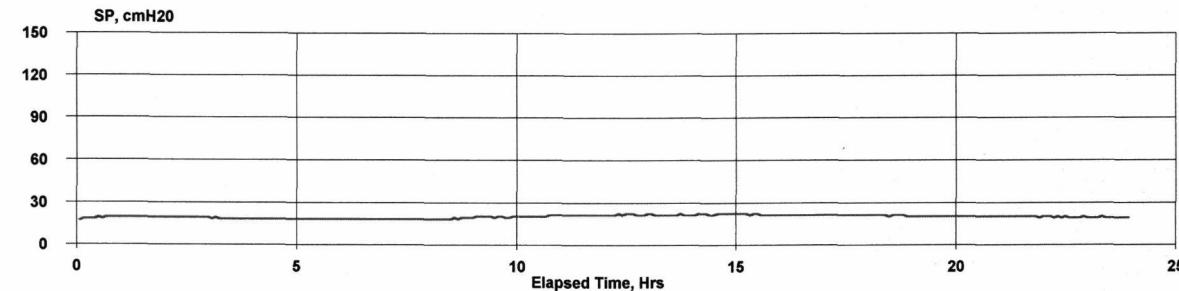
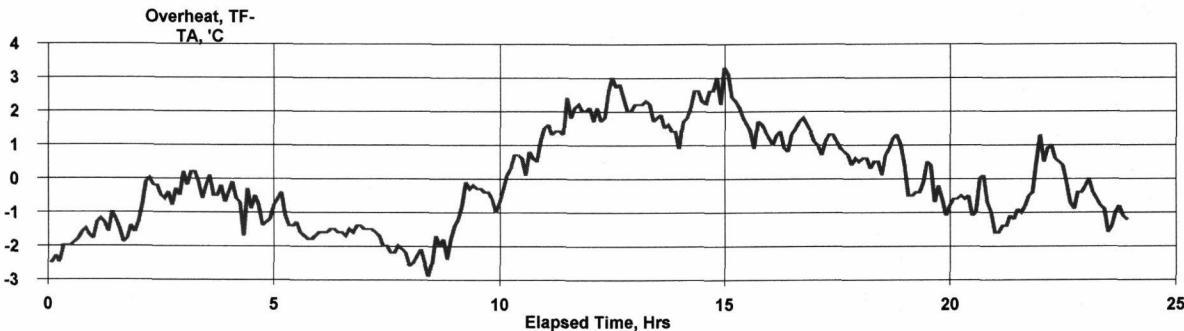
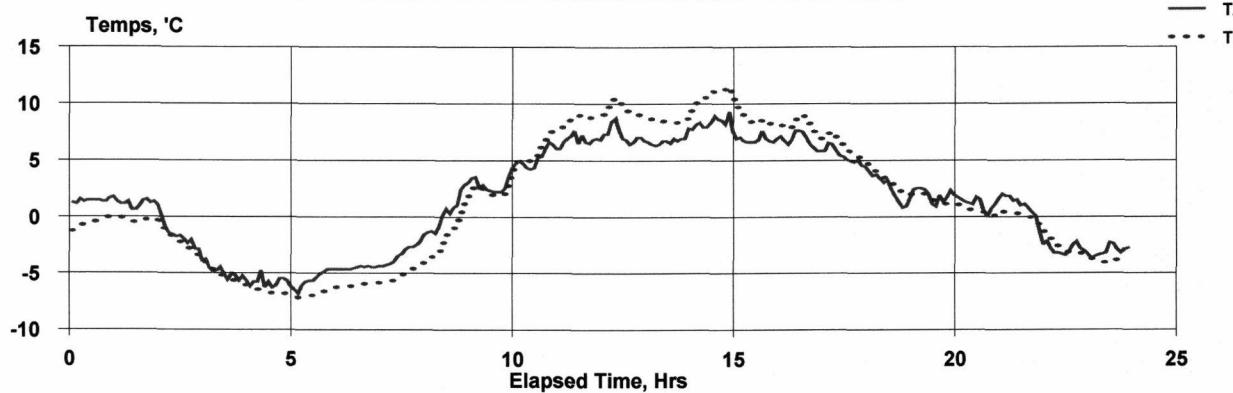
Mass Concentration Data:

Filter ID: 7	
Final Wt:	mg
Initial Wt:	mg
Delta Wt: 0.000	mg
Total Vol: 24.036	m^3

Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



Hourly

12-09-feb	0:05:08	588	1.4	-0.6	-2.0	18	16.71
12-09-feb	1:05:08	587	1.1	-0.3	-1.4	19	16.72
12-09-feb	2:05:08	588	-2.0	-2.3	-0.4	19	16.70
12-09-feb	3:05:08	587	-5.0	-5.3	-0.2	18	16.70
12-09-feb	4:05:08	587	-5.8	-6.7	-0.9	18	16.71
12-09-feb	5:05:08	587	-5.5	-6.9	-1.4	18	16.71
12-09-feb	6:05:08	587	-4.6	-6.1	-1.5	18	16.73
12-09-feb	7:05:08	587	-3.2	-5.2	-2.0	18	16.71
12-09-feb	8:05:08	588	0.5	-1.7	-2.2	18	16.71
12-09-feb	9:05:08	588	2.8	2.3	-0.5	20	16.71
12-09-feb	10:05:08	588	5.2	5.8	0.6	20	16.70
12-09-feb	11:05:08	588	6.8	8.6	1.8	21	16.71
12-09-feb	12:05:08	588	7.2	9.5	2.3	21	16.71
12-09-feb	13:05:08	587	6.7	8.5	1.8	21	16.71
12-09-feb	14:05:08	587	8.3	10.7	2.4	22	16.71
12-09-feb	15:05:08	588	6.8	8.6	1.8	21	16.70
12-09-feb	16:05:08	587	6.7	8.0	1.3	21	16.71
12-09-feb	17:05:08	588	5.3	6.2	0.9	21	16.72
12-09-feb	18:05:08	588	2.5	3.1	0.7	21	16.72
12-09-feb	19:05:08	588	1.9	1.5	-0.4	20	16.72
12-09-feb	20:05:08	588	1.2	0.5	-0.7	20	16.71
12-09-feb	21:05:08	588	0.7	0.0	-0.7	20	16.71
12-09-feb	22:05:08	588	-2.9	-2.8	0.1	19	16.71
12-09-feb	23:05:08	588	-3.1	-3.9	-0.9	19	16.70

BGI PQ200 Air Sampling System

Downloaded 2012 17 feb 10:09:10

Job Details:

Job Name: 12Feb17A.JOB
 Version: 5.62
 Serial No: 962
 Pump Time: 1431:46
 Flags:

Job Code:
 Site Name: 962A
 Station Code:
 Operators: KN
 User1:
 User2:

	Max	Min	Avg	Units
BP	582	577	579	mmHg
TA	-2.4	-13.7	-4.9	°C
Q	---	---	16.71	Lpm

QCV 0.51 %

Max overheat 3.9 °C
 occurred 16-feb 01:38:44

Timer Information:

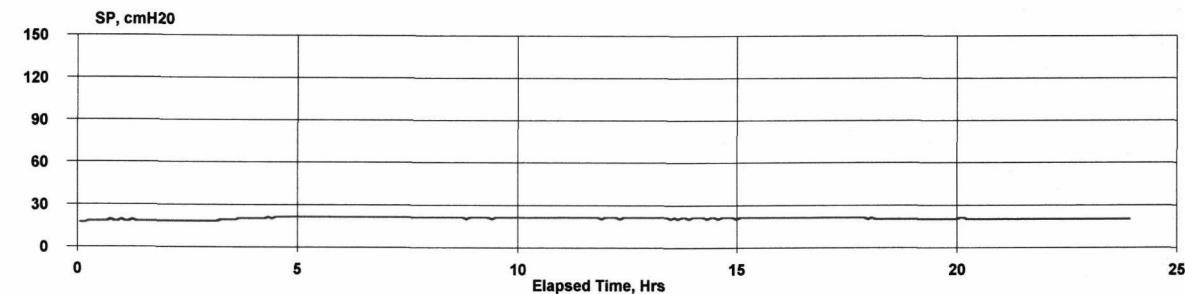
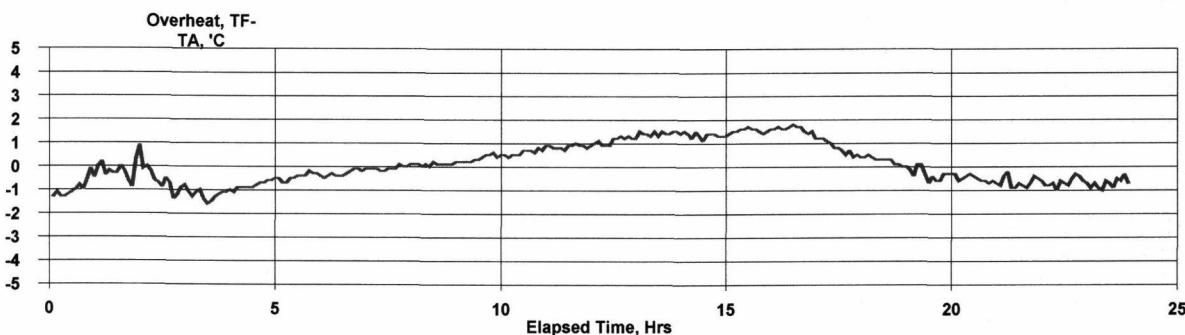
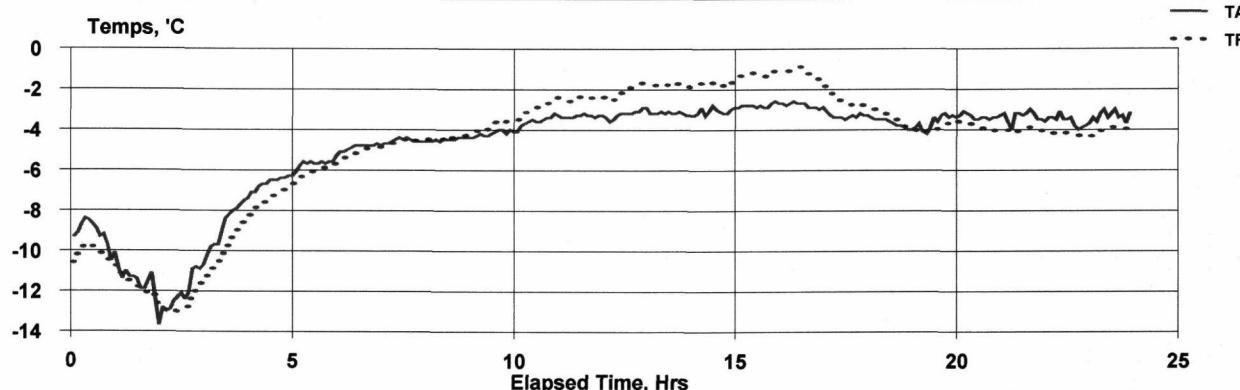
Date dd-mmm Time hh:mm:ss
 Start: 12-15-feb 0:00:08
 Stop: 12-16-feb 0:00:05
 ET: 23:59

Mass Concentration Data:

Filter ID: 11
 Final Wt: mg
 Initial Wt: mg
 Delta Wt: 0.000 mg
 Total Vol: 24.038 m^3

Mass Conc: 0 µg/m3

Notes 1:
 Notes 2:



Hourly

12-15-feb	0:05:08	579	-9.2	-10.1	-0.9	18	16.72
12-15-feb	1:05:08	579	-11.7	-11.8	-0.1	18	16.71
12-15-feb	2:05:08	579	-12.0	-12.6	-0.7	18	16.72
12-15-feb	3:05:08	579	-8.6	-9.9	-1.2	19	16.73
12-15-feb	4:05:08	578	-6.6	-7.4	-0.8	21	16.72
12-15-feb	5:05:08	579	-5.7	-6.1	-0.4	21	16.71
12-15-feb	6:05:08	579	-4.9	-5.2	-0.3	21	16.72
12-15-feb	7:05:08	579	-4.6	-4.6	-0.1	21	16.71
12-15-feb	8:05:08	579	-4.5	-4.4	0.1	21	16.71
12-15-feb	9:05:08	579	-4.2	-3.8	0.4	21	16.70
12-15-feb	10:05:08	579	-3.6	-2.9	0.6	21	16.71
12-15-feb	11:05:08	579	-3.3	-2.5	0.9	21	16.72
12-15-feb	12:05:08	579	-3.2	-2.1	1.1	21	16.72
12-15-feb	13:05:08	579	-3.2	-1.8	1.4	21	16.71
12-15-feb	14:05:08	579	-3.1	-1.7	1.3	21	16.73
12-15-feb	15:05:08	580	-2.8	-1.3	1.5	21	16.70
12-15-feb	16:05:08	580	-2.8	-1.2	1.6	21	16.71
12-15-feb	17:05:08	580	-3.3	-2.6	0.8	21	16.72
12-15-feb	18:05:08	580	-3.7	-3.4	0.3	20	16.71
12-15-feb	19:05:08	580	-3.6	-3.9	-0.3	20	16.72
12-15-feb	20:05:08	581	-3.4	-3.9	-0.5	20	16.73
12-15-feb	21:05:08	581	-3.4	-4.0	-0.7	20	16.70
12-15-feb	22:05:08	582	-3.6	-4.2	-0.7	20	16.70
12-15-feb	23:05:08	582	-3.3	-4.0	-0.7	20	16.70

BGI PQ200 Air Sampling System

Downloaded 2012 24 feb 11:53:16

Job Details:

Job Name: 12Feb24A.JOB
 Version: 5.62
 Serial No: 962
 Pump Time: 1455:45
 Flags:

Job Code:
 Site Name: 962A
 Station Code:
 Operators: KN
 User1:
 User2:

	Max	Min	Avg	Units
BP	587	583	585	mmHg
TA	7.7	-11.1	-1.5	°C
Q	---	---	16.71	Lpm

QCV 0.51 %

Max overheat 4.3 °C
 occurred 21-feb 12:00:49

Timer Information:

Date dd-mmm Time hh:mm:ss
 Start: 12-21-feb 0:00:08
 Stop: 12-22-feb 0:00:05
 ET: 23:59

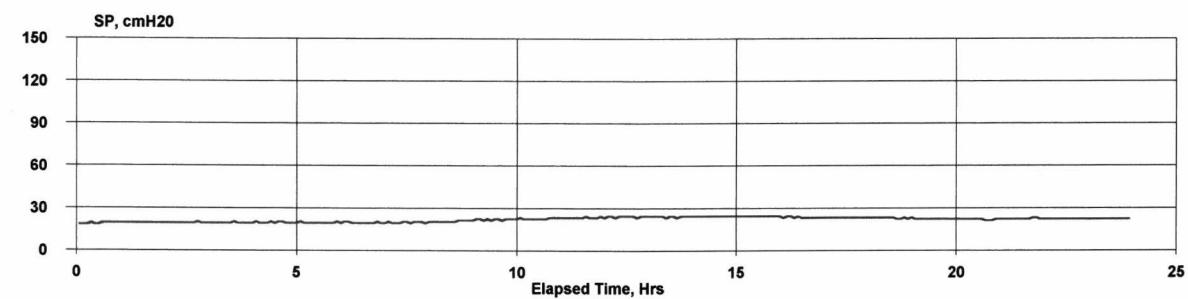
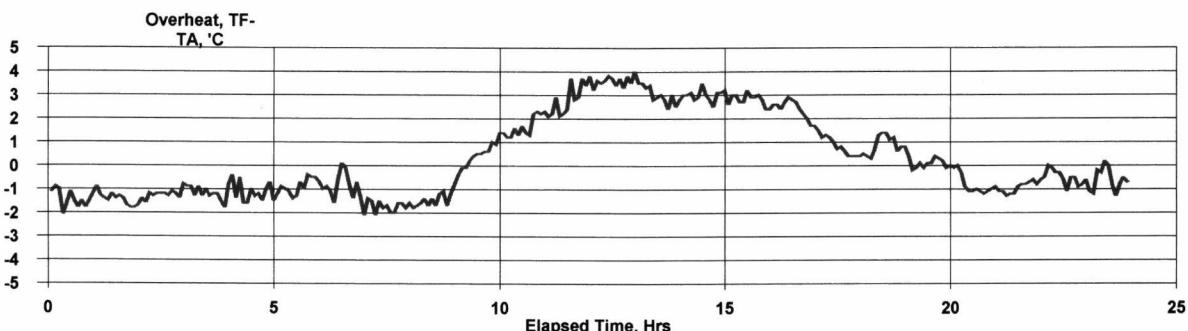
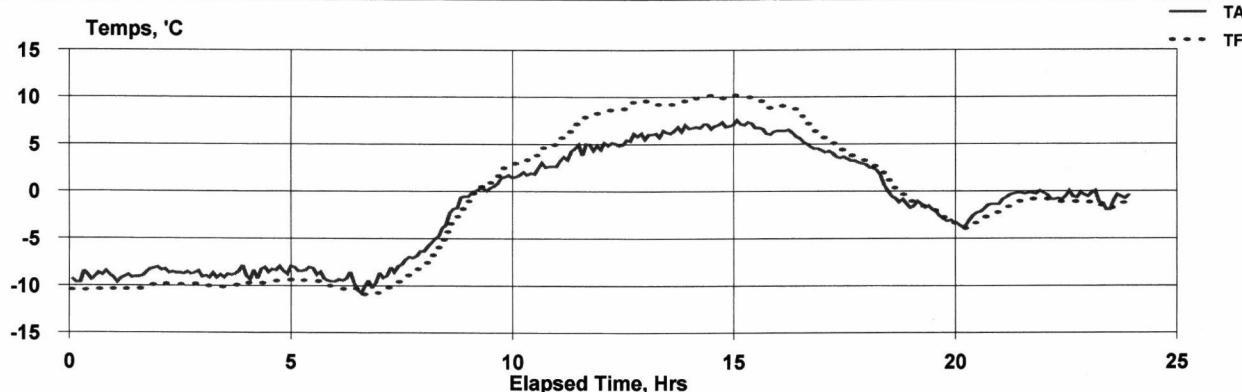
Mass Concentration Data:

Filter ID: 14
 Final Wt: mg
 Initial Wt: mg
 Delta Wt: 0.000 mg
 Total Vol: 24.038 m^3

Mass Conc: 0 µg/m3

Notes 1:

Notes 2:



Hourly

12-21-feb	0:05:08	584	-9.1	-10.5	-1.4	19	16.71
12-21-feb	1:05:08	584	-8.9	-10.3	-1.5	19	16.71
12-21-feb	2:05:08	584	-8.7	-9.9	-1.2	19	16.72
12-21-feb	3:05:08	584	-8.8	-10.0	-1.2	19	16.73
12-21-feb	4:05:08	584	-8.5	-9.7	-1.1	19	16.72
12-21-feb	5:05:08	584	-8.8	-9.7	-0.9	19	16.73
12-21-feb	6:05:08	584	-9.7	-10.6	-1.0	19	16.73
12-21-feb	7:05:08	584	-7.7	-9.4	-1.7	20	16.72
12-21-feb	8:05:08	585	-3.1	-4.5	-1.4	20	16.73
12-21-feb	9:05:08	585	0.7	1.1	0.5	22	16.71
12-21-feb	10:05:08	586	2.2	3.9	1.7	22	16.71
12-21-feb	11:05:08	586	4.2	7.1	2.9	23	16.72
12-21-feb	12:05:08	586	5.3	8.9	3.6	24	16.71
12-21-feb	13:05:08	585	6.3	9.3	3.0	24	16.71
12-21-feb	14:05:08	585	6.9	9.9	3.0	24	16.70
12-21-feb	15:05:08	585	6.7	9.5	2.8	24	16.71
12-21-feb	16:05:08	585	5.4	7.8	2.4	23	16.71
12-21-feb	17:05:08	586	3.5	4.3	0.8	23	16.71
12-21-feb	18:05:08	586	0.2	1.1	0.9	23	16.70
12-21-feb	19:05:08	586	-2.3	-2.2	0.1	22	16.71
12-21-feb	20:05:08	586	-2.4	-3.2	-0.8	22	16.71
12-21-feb	21:05:08	587	-0.3	-1.3	-0.9	22	16.71
12-21-feb	22:05:08	587	-0.6	-1.1	-0.5	22	16.72
12-21-feb	23:05:08	586	-0.9	-1.5	-0.6	22	16.71

BGI PQ200 Air Sampling System

Downloaded 2012 28 feb 11:27:22

Job Details:

Job Name: 12Feb28A.JOB
 Version: 5.62
 Serial No: 962
 Pump Time: 1479:44
 Flags:

Job Code:
 Site Name:
 Station Code:
 Operators:
 User1:
 User2:

	Max	Min	Avg	Units
BP	580	574	576	mmHg
TA	7.5	-3.2	1.3	°C
Q	---	---	16.7	Lpm

QCV 0.47 %

Max overheat 2.6 °C
 occurred 27-feb 13:40:45

Timer Information:

Date dd-mmm	Time hh:mm:ss
Start: 12-27-feb	0:00:08
Stop: 12-28-feb	0:00:04

ET: 23:59

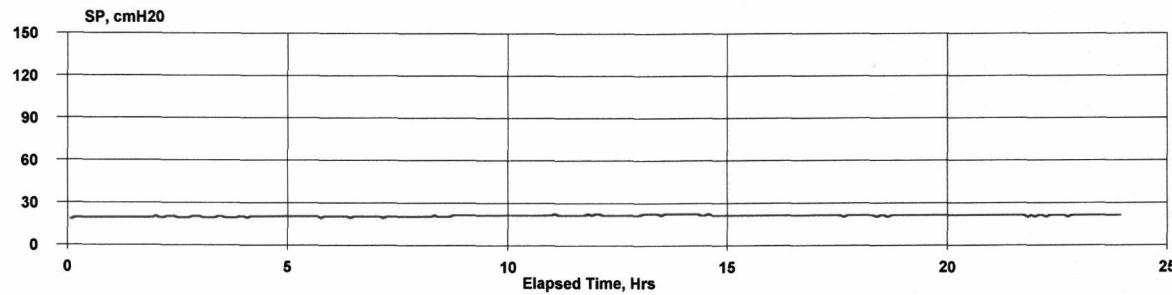
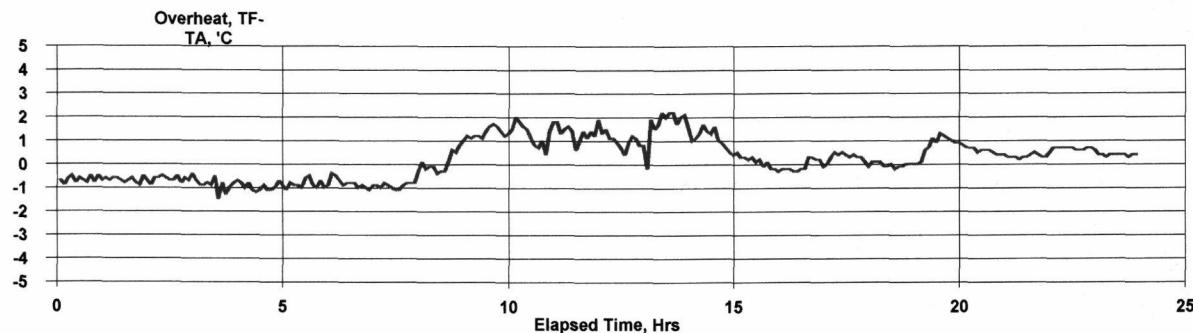
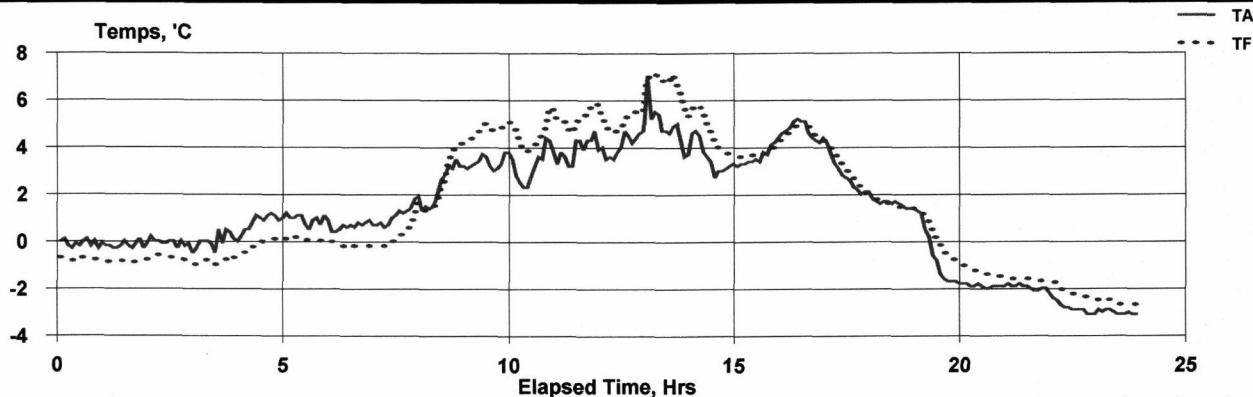
Mass Concentration Data:

Filter ID:	
Final Wt:	mg
Initial Wt:	mg
Delta Wt:	0.000 mg
Total Vol:	24.033 m^3

Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



Hourly

12-27-feb	0:05:08	579	-0.1	-0.8	-0.7	19	16.71
12-27-feb	1:05:08	579	-0.2	-0.9	-0.7	19	16.71
12-27-feb	2:05:08	579	-0.1	-0.7	-0.6	20	16.71
12-27-feb	3:05:08	578	0.0	-0.9	-0.9	19	16.70
12-27-feb	4:05:08	578	0.9	-0.1	-1.0	20	16.71
12-27-feb	5:05:08	578	0.9	0.1	-0.9	20	16.71
12-27-feb	6:05:08	578	0.7	-0.2	-0.8	20	16.72
12-27-feb	7:05:08	578	1.2	0.3	-0.9	20	16.71
12-27-feb	8:05:08	579	2.4	2.6	0.1	20	16.72
12-27-feb	9:05:08	579	3.4	4.7	1.3	21	16.71
12-27-feb	10:05:08	578	3.3	4.6	1.3	21	16.71
12-27-feb	11:05:08	578	3.9	5.3	1.4	21	16.71
12-27-feb	12:05:08	578	4.1	5.1	1.0	21	16.71
12-27-feb	13:05:08	576	4.9	6.6	1.7	22	16.72
12-27-feb	14:05:08	576	3.6	4.7	1.1	21	16.71
12-27-feb	15:05:08	575	3.6	3.7	0.1	21	16.72
12-27-feb	16:05:08	575	4.7	4.7	-0.1	21	16.70
12-27-feb	17:05:08	575	2.8	3.0	0.3	21	16.69
12-27-feb	18:05:08	575	1.6	1.6	0.0	21	16.71
12-27-feb	19:05:08	576	-0.7	0.1	0.8	21	16.71
12-27-feb	20:05:08	575	-1.9	-1.3	0.6	21	16.74
12-27-feb	21:05:08	575	-2.0	-1.6	0.3	21	16.72
12-27-feb	22:05:08	575	-2.8	-2.2	0.7	21	16.72
12-27-feb	23:05:08	575	-3.0	-2.6	0.4	21	16.71

BGI PQ200 Air Sampling System

Downloaded 2012 12 mar 08:59:40

Job Details:

Job Name: 12Mar12A.JOB
 Version: 5.62
 Serial No: 962
 Pump Time: 1503:43
 Flags:

Job Code:
 Site Name: 962A
 Station Code:
 Operators: KN
 User1:
 User2:

	Max	Min	Avg	Units
BP	586	581	583	mmHg
TA	12.5	-5.3	2.8	°C
Q	---	---	16.71	Lpm

QCV 0.52 %

Max overheat 5.2 °C
 occurred 11-mar 18:52:06

Timer Information:

Date Time
 dd-mmm hh:mm:ss
 Start: 12-10-mar 0:00:08
 Stop: 12-11-mar 0:00:05
 ET: 23:59

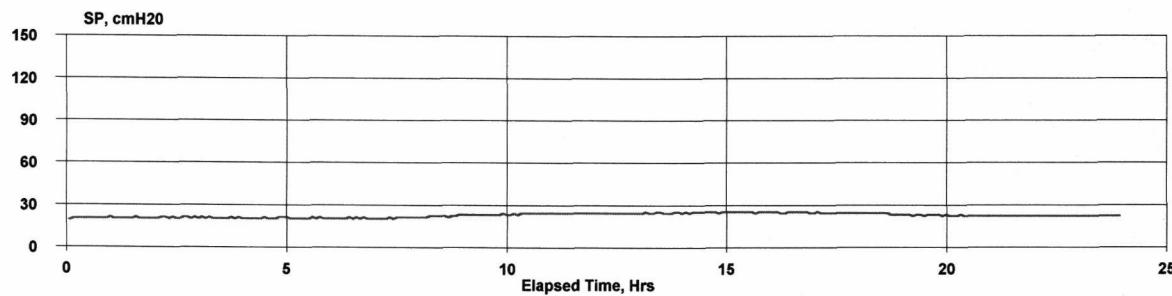
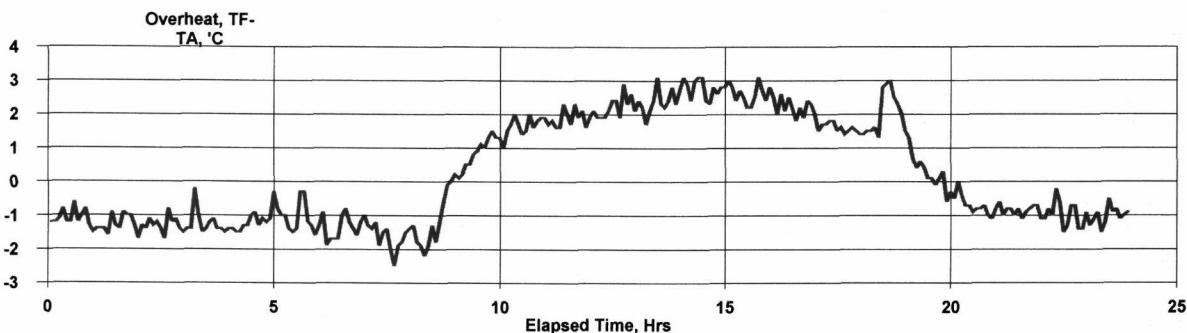
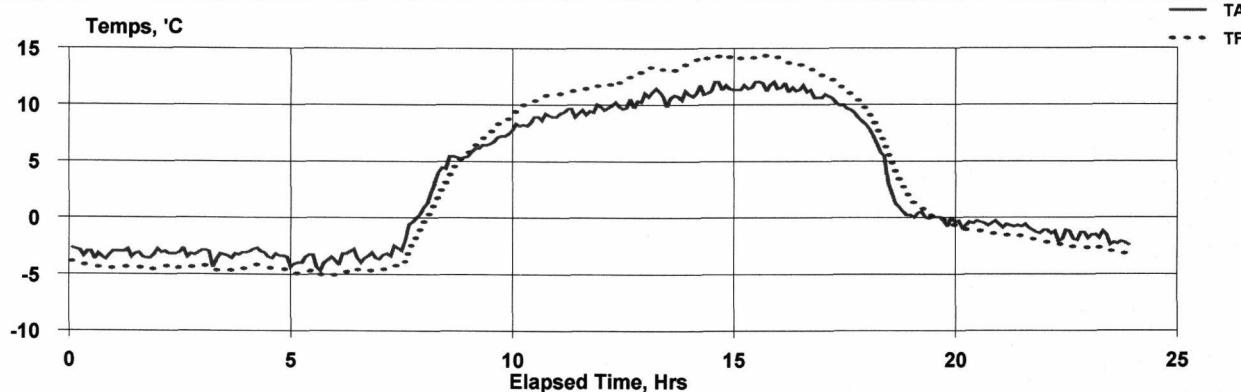
Mass Concentration Data:

Filter ID: 7
 Final Wt: mg
 Initial Wt: mg
 Delta Wt: 0.000 mg
 Total Vol: 24.037 m^3

Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



Hourly

12-10-mar	0:05:08	586	-3.2	-4.3	-1.1	20	16.72
12-10-mar	1:05:08	585	-3.2	-4.5	-1.3	20	16.72
12-10-mar	2:05:08	585	-3.1	-4.4	-1.3	21	16.72
12-10-mar	3:05:08	584	-3.4	-4.6	-1.2	20	16.72
12-10-mar	4:05:08	584	-3.3	-4.5	-1.2	20	16.71
12-10-mar	5:05:08	584	-3.9	-5.0	-1.1	20	16.71
12-10-mar	6:05:08	584	-3.5	-4.8	-1.3	20	16.71
12-10-mar	7:05:08	584	-1.7	-3.3	-1.7	21	16.71
12-10-mar	8:05:08	584	4.3	3.1	-1.2	22	16.71
12-10-mar	9:05:08	584	6.7	7.6	0.9	23	16.72
12-10-mar	10:05:08	584	8.6	10.3	1.7	24	16.71
12-10-mar	11:05:08	584	9.4	11.3	1.9	24	16.70
12-10-mar	12:05:08	584	10.0	12.2	2.2	24	16.70
12-10-mar	13:05:08	583	10.8	13.2	2.4	24	16.71
12-10-mar	14:05:08	582	11.4	14.1	2.8	25	16.69
12-10-mar	15:05:08	582	11.6	14.2	2.6	25	16.70
12-10-mar	16:05:08	582	11.2	13.4	2.2	25	16.70
12-10-mar	17:05:08	582	9.7	11.2	1.6	24	16.70
12-10-mar	18:05:08	582	3.4	5.4	2.0	24	16.72
12-10-mar	19:05:08	582	-0.1	0.2	0.3	23	16.71
12-10-mar	20:05:08	582	-0.5	-1.2	-0.7	22	16.71
12-10-mar	21:05:08	582	-0.9	-1.8	-0.9	22	16.71
12-10-mar	22:05:08	582	-1.5	-2.5	-1.0	22	16.71
12-10-mar	23:05:08	581	-1.9	-2.9	-1.0	22	16.72

BGI PQ200 Air Sampling System

Downloaded 2012 19 mar 10:10:22

Job Details:

Job Name: 12Mar19A.JOB
 Version: 5.62
 Serial No: 962
 Pump Time: 1527:42
 Flags:

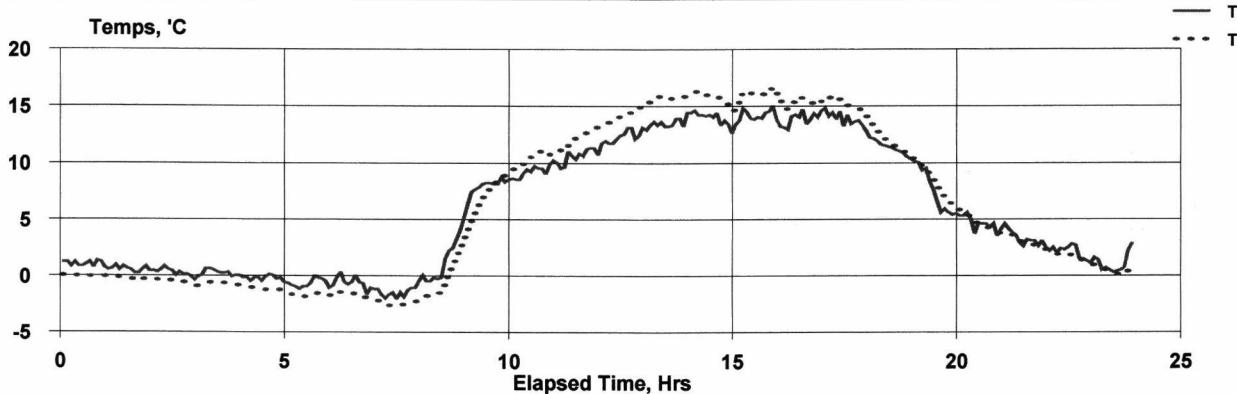
Job Code:
 Site Name: 962A
 Station Code:
 Operators: KN
 User1:
 User2:

	Max	Min	Avg	Units	Timer Information:		Mass Concentration Data:	
BP	585	579	582	mmHg			Filter ID:	11
TA	15.6	-2.3	5.8	°C			Final Wt:	mg
Q	---	---	16.71	Lpm			Initial Wt:	mg
QCV		0.48 %		Start: 12-16-mar		Date dd-mmm	Time hh:mm:ss	Delta Wt: 0.000 mg
Max overheated occurred 16-mar 13:18:14		3.2 °C		Stop: 12-17-mar				Total Vol: 24.038 m³
		ET: 23:59		Mass Conc: 0 µg/m³				

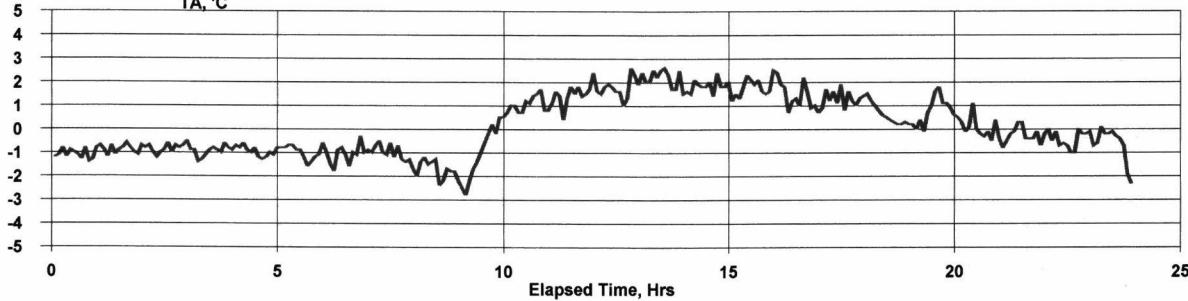
Notes 1:

Notes 2:

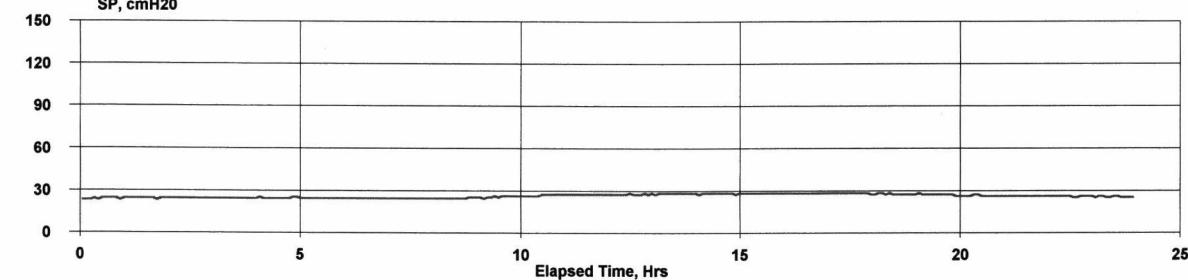
Temps, °C



Overheat, TF-TA, °C



SP, cmH2O



Hourly

12-16-mar	0:05:08	585	1.0	-0.1	-1.1	24	16.69
12-16-mar	1:05:08	584	0.5	-0.3	-0.9	24	16.71
12-16-mar	2:05:08	584	0.2	-0.6	-0.8	24	16.72
12-16-mar	3:05:08	583	0.2	-0.7	-1.0	24	16.72
12-16-mar	4:05:08	583	-0.2	-1.2	-1.0	24	16.72
12-16-mar	5:05:08	583	-0.7	-1.7	-1.0	24	16.72
12-16-mar	6:05:08	583	-0.7	-1.8	-1.1	24	16.71
12-16-mar	7:05:08	583	-1.5	-2.5	-1.0	24	16.71
12-16-mar	8:05:08	583	1.4	-0.4	-1.7	24	16.71
12-16-mar	9:05:08	583	7.9	7.0	-1.0	26	16.72
12-16-mar	10:05:08	583	9.3	10.3	1.1	27	16.72
12-16-mar	11:05:08	583	10.6	12.1	1.5	27	16.71
12-16-mar	12:05:08	583	12.3	14.1	1.7	27	16.71
12-16-mar	13:05:08	582	13.5	15.6	2.2	28	16.72
12-16-mar	14:05:08	582	13.9	15.8	1.8	28	16.72
12-16-mar	15:05:08	581	14.1	15.9	1.8	28	16.72
12-16-mar	16:05:08	581	13.9	15.3	1.4	28	16.72
12-16-mar	17:05:08	581	13.8	15.1	1.3	28	16.70
12-16-mar	18:05:08	581	11.3	11.9	0.6	27	16.71
12-16-mar	19:05:08	580	7.4	8.2	0.8	27	16.73
12-16-mar	20:05:08	580	4.6	4.7	0.1	26	16.71
12-16-mar	21:05:08	580	3.3	3.0	-0.3	26	16.71
12-16-mar	22:05:08	580	2.1	1.6	-0.4	26	16.71
12-16-mar	23:05:08	580	1.1	0.4	-0.7	25	16.71

BGI PQ200 Air Sampling System

Downloaded 2012 23 mar 12:38:06

Job Details:

Job Name: 12Mar23A.JOB

Version: 5.62

Serial No: 962

Pump Time: 1551:41

Flags:

Job Code:

Site Name: 962A

Station Code:

Operators: KN

User1:

User2:

	Max	Min	Avg	Units
BP	584	582	583	mmHg
TA	17.2	-3.3	6.3	°C
Q	---	---	16.71	Lpm

QCV 0.53 %

 Max overheated 4.3 °C
 occurred 22-mar 19:41:45

Timer Information:

Date	Time
dd-mmm	hh:mm:ss
Start: 12-22-mar	0:00:08
Stop: 12-23-mar	0:00:05

ET: 23:59

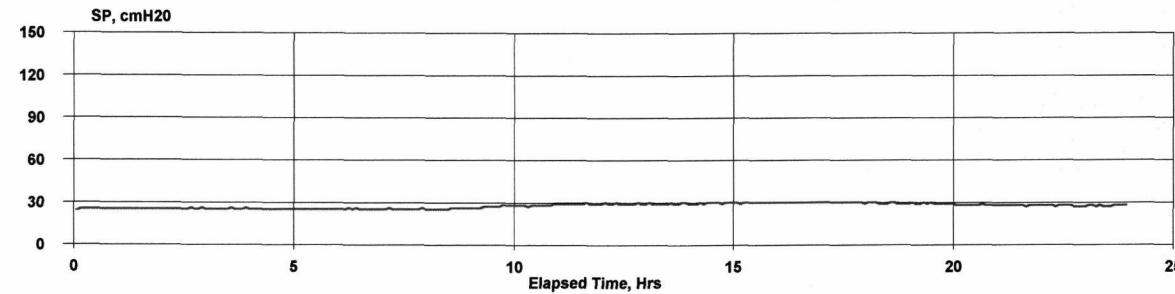
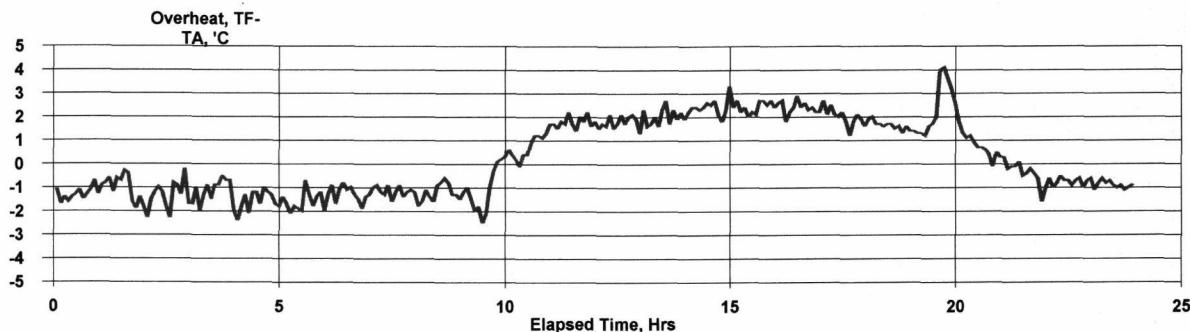
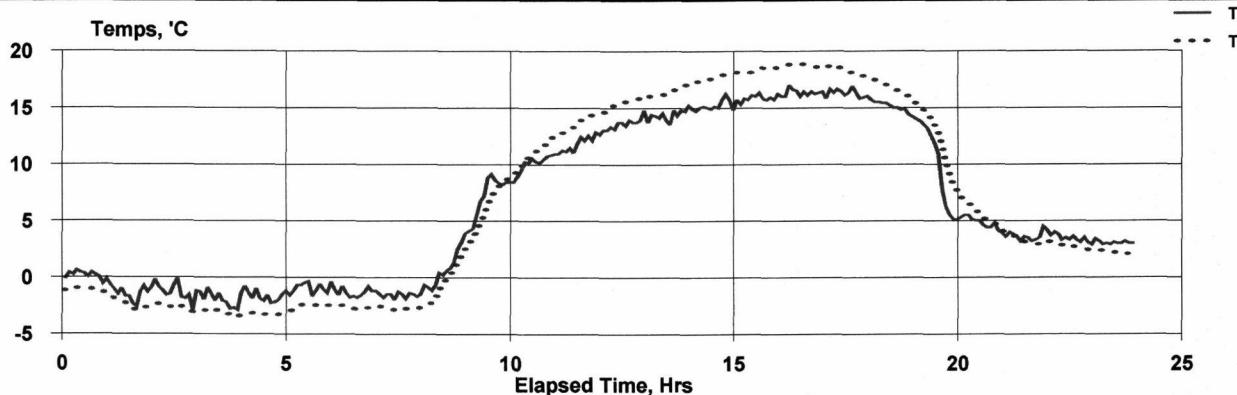
Mass Concentration Data:

Filter ID:	14
Final Wt:	mg
Initial Wt:	mg
Delta Wt:	0.000 mg
Total Vol:	24.041 m^3

Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



Hourly

12-22-mar	0:05:08	584	0.1	-1.2	-1.3	25	16.71
12-22-mar	1:05:08	584	-1.4	-2.4	-1.0	25	16.71
12-22-mar	2:05:08	584	-1.3	-2.7	-1.4	25	16.72
12-22-mar	3:05:08	583	-1.9	-3.1	-1.2	25	16.72
12-22-mar	4:05:08	583	-1.7	-3.2	-1.6	25	16.72
12-22-mar	5:05:08	583	-1.0	-2.6	-1.6	25	16.72
12-22-mar	6:05:08	583	-1.4	-2.6	-1.3	25	16.72
12-22-mar	7:05:08	583	-1.6	-2.8	-1.2	25	16.72
12-22-mar	8:05:08	584	0.8	-0.4	-1.2	26	16.71
12-22-mar	9:05:08	584	7.3	6.2	-1.1	27	16.72
12-22-mar	10:05:08	584	10.1	10.8	0.8	28	16.71
12-22-mar	11:05:08	584	11.8	13.6	1.8	29	16.71
12-22-mar	12:05:08	584	13.6	15.4	1.8	29	16.71
12-22-mar	13:05:08	584	14.4	16.4	2.0	29	16.72
12-22-mar	14:05:08	583	15.2	17.6	2.4	30	16.71
12-22-mar	15:05:08	583	15.9	18.3	2.4	30	16.71
12-22-mar	16:05:08	583	16.3	18.7	2.4	30	16.71
12-22-mar	17:05:08	583	16.3	18.3	2.0	30	16.71
12-22-mar	18:05:08	583	15.1	16.7	1.6	29	16.72
12-22-mar	19:05:08	583	9.9	12.3	2.3	29	16.71
12-22-mar	20:05:08	583	4.8	5.6	0.8	28	16.71
12-22-mar	21:05:08	583	3.7	3.3	-0.4	28	16.71
12-22-mar	22:05:08	583	3.4	2.7	-0.7	28	16.71
12-22-mar	23:05:08	583	3.1	2.2	-0.9	28	16.71

BGI PQ200 Air Sampling System

Downloaded 2012 29 mar 11:20:46

Job Details:

Job Name: 12Mar29A.JOB
 Version: 5.62
 Serial No: 962
 Pump Time: 1575:40
 Flags:

Job Code:
 Site Name: 962A
 Station Code:
 Operators: KN
 User1:
 User2:

	Max	Min	Avg	Units
BP	584	582	583	mmHg
TA	15.4	-3	5.6	°C
Q	---	---	16.71	Lpm

QCV 0.55 %
 Max overheated 3.1 °C
 occurred 28-mar 14:43:54

Timer Information:

Date dd-mmm	Time hh:mm:ss
Start: 12-28-mar	0:00:08
Stop: 12-29-mar	0:00:05
ET: 23:59	

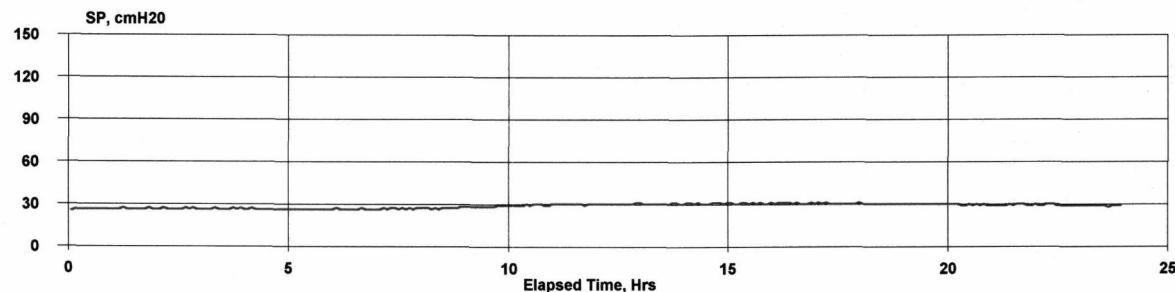
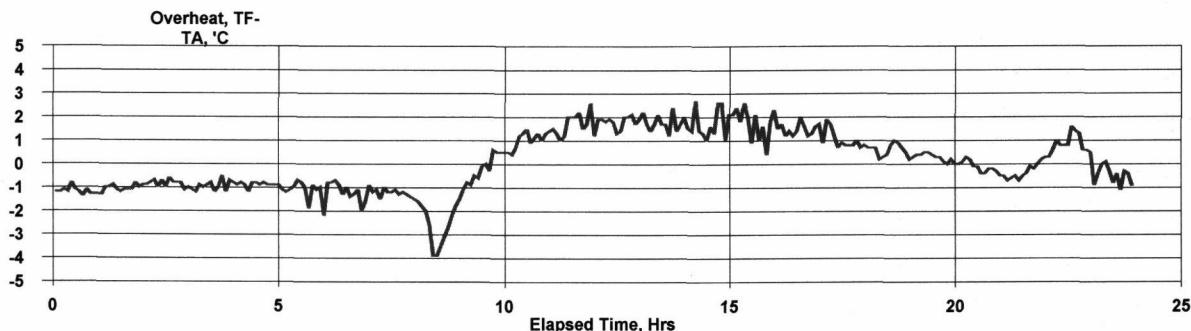
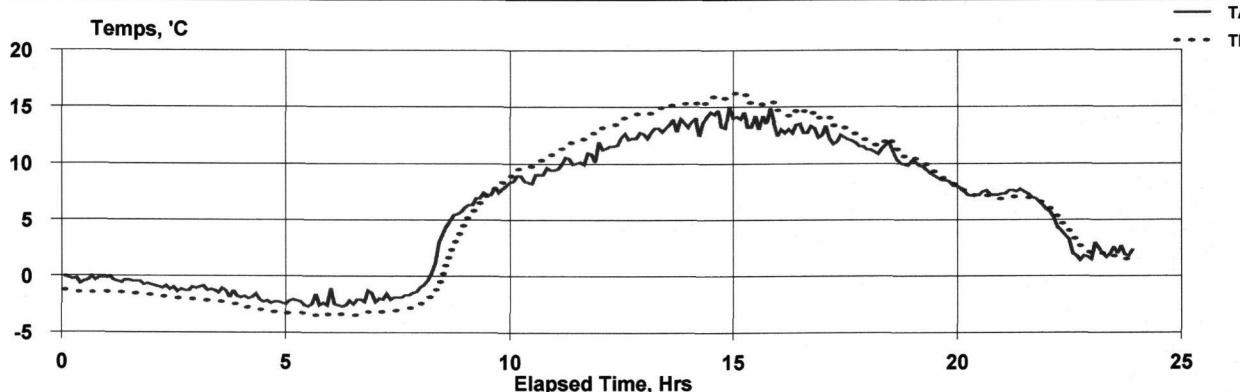
Mass Concentration Data:

Filter ID: 4	
Final Wt:	mg
Initial Wt:	mg
Delta Wt: 0.000	mg
Total Vol: 24.041	m³

Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



Hourly

12-28-mar	0:05:08	584	-0.3	-1.5	-1.2	26	16.70
12-28-mar	1:05:08	584	-0.5	-1.6	-1.0	26	16.72
12-28-mar	2:05:08	584	-1.1	-2.0	-0.9	26	16.70
12-28-mar	3:05:08	583	-1.4	-2.3	-0.9	26	16.71
12-28-mar	4:05:08	583	-2.2	-3.0	-0.9	26	16.71
12-28-mar	5:05:08	583	-2.2	-3.4	-1.2	26	16.71
12-28-mar	6:05:08	583	-2.2	-3.4	-1.2	26	16.71
12-28-mar	7:05:08	584	-1.7	-3.0	-1.3	27	16.72
12-28-mar	8:05:08	584	3.2	0.7	-2.6	27	16.72
12-28-mar	9:05:08	584	7.3	7.1	-0.2	28	16.72
12-28-mar	10:05:08	584	8.9	9.9	1.1	29	16.71
12-28-mar	11:05:08	584	10.3	12.0	1.7	30	16.71
12-28-mar	12:05:08	584	12.0	13.8	1.8	30	16.71
12-28-mar	13:05:08	584	13.2	14.9	1.8	30	16.71
12-28-mar	14:05:08	583	13.9	15.6	1.7	31	16.71
12-28-mar	15:05:08	583	13.7	15.5	1.8	31	16.72
12-28-mar	16:05:08	583	12.9	14.4	1.5	31	16.71
12-28-mar	17:05:08	583	12.0	13.0	1.0	30	16.71
12-28-mar	18:05:08	583	10.7	11.3	0.6	30	16.71
12-28-mar	19:05:08	583	8.9	9.2	0.3	30	16.71
12-28-mar	20:05:08	583	7.3	7.2	-0.1	30	16.71
12-28-mar	21:05:08	583	7.1	6.8	-0.3	29	16.72
12-28-mar	22:05:08	583	3.0	3.9	0.9	29	16.70
12-28-mar	23:05:08	583	2.2	1.7	-0.5	29	16.71

Compliance Monitor 963B



PM₁₀ Sampler Summary

January 1, 2012 - March 31, 2012

Network: Alton Coal Development, LLC

Site: Coal Hollow Mine

Sampler ID: 963B

AQS ID:

Sampler Type: BGI FRM Single

Date	ID	Filter	Concentration (µg/m ³)	Concentration (µg/m ³)	Sample Period (hr:min)	Sample Volume (m ³)	Std Volume (m ³)	Tare	Mass (mg)	Gross	Net	Flag	Comments
01/04/12	P0309506		21.0	24.8	23:59	24.0	20.3	147.863	148.367	0.504			
01/10/12	P0331195		17.0	20.0	24:00	24.0	20.4	140.426	140.834	0.408			
01/16/12	P0331198		34.1	40.3	23:59	24.0	20.3	141.800	142.619	0.819			
01/22/12	P0331204		1.6	1.9	23:59	24.0	20.7	139.325	139.364	0.039			
01/28/12	P0331201		4.4	5.1	23:59	24.0	20.8	137.004	137.109	0.105			
02/03/12	P0331724		4.4	5.1	24:00	24.0	20.5	138.815	138.920	0.105			
02/09/12	P0331728		7.1	8.4	24:00	24.0	20.3	139.522	139.692	0.170			
02/15/12	P0332975		4.2	4.9	23:59	24.0	20.5	138.326	138.426	0.100			
02/21/12	P0332978		5.3	6.2	23:59	24.0	20.5	139.478	139.605	0.127			
02/27/12	P0333145		42.9	51.5	23:59	24.0	20.0	140.150	141.180	1.030			
03/04/12	P0333148		5.2	6.2	23:59	24.0	20.2	138.957	139.083	0.126			
03/10/12	P0333150		7.6	9.1	23:59	24.0	20.1	139.963	140.146	0.183			
03/16/12	W0383635		15.2	18.4	23:59	24.0	19.8	143.712	144.077	0.365			
03/22/12	W0383638		15.6	18.9	23:59	24.0	19.9	144.289	144.664	0.375			
03/28/12	W0384250		61.5	74.5	23:59	24.0	19.9	145.090	146.569	1.479			

# Valid	Recovery	Average	St. Dev.	Max	Min
15	100%	19.7	20.8	74.5	1.9

BGI PQ200 Air Sampling System

Downloaded 2012 05 jan 13:23:50

Job Details:		Job Code: Site Name: 963B Station Code: Operators: KN User1: User2:	
Job Name: 12Jan05B.JOB Notes 2: 5.62 Serial No: 963 Pump Time: 1390:13 Flags:			
BP TA Q	Max 600 Min 596 Avg 598 Units mmHg Max 13.9 Min -2.7 Avg 4.1 Units °C Max --- Min --- Avg 16.7 Units Lpm	Timer Information: Date dd-mmm Time hh:mm:ss Start: 12-04-jan 0:00:08 Stop: 12-05-jan 0:00:04 ET: 23:59	Mass Concentration Data: Filter ID: 8 Final Wt: mg Initial Wt: mg Delta Wt: 0.000 mg Total Vol: 24.038 m^3 Mass Conc: 0 µg/m3
QCV 0.53 % Max overheat 2.3 °C occurred 04-jan 14:44:00			
Notes 1: Notes 2:			
<p>Temps, °C</p> <p>TA</p> <p>TF</p> <p>Elapsed Time, Hrs</p>			
<p>Overheat, TF - TA, °C</p> <p>Elapsed Time, Hrs</p>			
<p>SP, cmH2O</p> <p>Elapsed Time, Hrs</p>			

Hourly

12-04-jan	0:05:08	598	0.1	-3.0	-3.0	23	16.71
12-04-jan	1:05:08	598	2.2	-1.2	-3.4	24	16.72
12-04-jan	2:05:08	598	3.3	1.0	-2.2	24	16.70
12-04-jan	3:05:08	598	-0.1	-1.3	-1.3	24	16.71
12-04-jan	4:05:08	599	0.3	-1.8	-2.1	24	16.71
12-04-jan	5:05:08	599	0.3	-2.0	-2.3	24	16.70
12-04-jan	6:05:08	599	-1.3	-3.0	-1.7	24	16.71
12-04-jan	7:05:08	599	-1.2	-3.4	-2.2	24	16.70
12-04-jan	8:05:08	599	2.4	-0.2	-2.6	24	16.71
12-04-jan	9:05:08	600	6.7	5.6	-1.2	25	16.71
12-04-jan	10:05:08	600	10.9	11.0	0.1	26	16.70
12-04-jan	11:05:08	600	12.1	13.5	1.4	27	16.71
12-04-jan	12:05:08	599	11.9	13.3	1.4	27	16.71
12-04-jan	13:05:08	599	12.6	13.8	1.2	27	16.70
12-04-jan	14:05:08	599	13.2	14.5	1.3	27	16.70
12-04-jan	15:05:08	599	12.6	13.9	1.3	27	16.71
12-04-jan	16:05:08	599	11.3	12.3	1.0	27	16.71
12-04-jan	17:05:08	599	5.3	6.3	1.1	27	16.71
12-04-jan	18:05:08	599	1.3	0.9	-0.4	26	16.72
12-04-jan	19:05:08	598	-0.3	-1.4	-1.1	25	16.70
12-04-jan	20:05:08	598	-0.7	-2.5	-1.8	25	16.71
12-04-jan	21:05:08	598	-0.9	-2.8	-1.8	25	16.70
12-04-jan	22:05:08	598	-1.4	-3.2	-1.9	25	16.71
12-04-jan	23:05:08	598	-2.3	-3.9	-1.6	25	16.71

BGI PQ200 Air Sampling System

Downloaded 2012 11 jan 10:42:21

Job Details:				Job Code:				
Job Name: 12Jan11B.JOB				Site Name: 963B				
Version: 5.62				Station Code:				
Serial No: 963				Operators: KN				
Pump Time: 1414:13				User1:				
Flags:				User2:				
BP	Max 594	Min 589	Avg 591	mmHg	Timer Information:		Mass Concentration Data:	
TA	12.1	-6.7	0.7	°C	Date dd-mmm	Time hh:mm:ss	Filter ID: 19	mg
Q	---	---	16.71	Lpm	Start: 12-10-jan	0:00:00	Final Wt:	mg
QCV 0.52 %				Stop: 12-11-jan	0:00:04	Initial Wt:	mg	
Max overheat 2.6 °C occured 10-jan 13:32:08				ET: 24:00:00		Delta Wt: 0.000	mg	
						Total Vol: 24.041	m^3	
						Mass Conc: 0	µg/m3	
Notes 1: Notes 2:								
<p>Temps, °C</p> <p>Legend: TA (solid line), TF (dashed line)</p> <p>Y-axis: -10 to 15</p> <p>X-axis: Elapsed Time, Hrs (0 to 25)</p>								
<p>Overheat, TF - TA, °C</p> <p>Y-axis: -5 to 5</p> <p>X-axis: Elapsed Time, Hrs (0 to 25)</p>								
<p>SP, cmH2O</p> <p>Y-axis: 0 to 150</p> <p>X-axis: Elapsed Time, Hrs (0 to 25)</p>								

Hourly

12-10-jan	0:04:19	594	-2.6	-4.4	-1.8	22	16.70
12-10-jan	1:04:19	593	-3.3	-4.8	-1.5	22	16.72
12-10-jan	2:04:19	593	-4.3	-5.6	-1.3	23	16.72
12-10-jan	3:04:19	593	-4.0	-5.9	-1.8	22	16.71
12-10-jan	4:04:19	593	-4.9	-6.3	-1.5	22	16.71
12-10-jan	5:04:19	592	-5.6	-7.0	-1.4	22	16.71
12-10-jan	6:04:19	592	-5.6	-7.5	-1.9	22	16.71
12-10-jan	7:04:19	592	-5.2	-7.1	-1.9	23	16.72
12-10-jan	8:04:19	592	-4.0	-6.1	-2.1	23	16.71
12-10-jan	9:04:19	593	1.5	-0.3	-1.8	24	16.71
12-10-jan	10:04:19	593	5.9	5.4	-0.5	25	16.71
12-10-jan	11:04:19	592	8.7	9.8	1.0	26	16.72
12-10-jan	12:04:19	591	9.6	11.2	1.6	27	16.71
12-10-jan	13:04:19	591	10.8	12.1	1.3	27	16.71
12-10-jan	14:04:19	590	11.1	12.5	1.4	27	16.69
12-10-jan	15:04:19	590	10.1	11.5	1.4	27	16.71
12-10-jan	16:04:19	590	8.3	9.6	1.3	27	16.71
12-10-jan	17:04:19	590	3.8	4.8	1.0	26	16.71
12-10-jan	18:04:19	590	-0.4	-0.3	0.1	25	16.71
12-10-jan	19:04:19	590	-1.9	-2.7	-0.9	25	16.72
12-10-jan	20:04:19	590	-2.1	-3.7	-1.6	25	16.72
12-10-jan	21:04:19	590	-2.8	-4.3	-1.6	25	16.71
12-10-jan	22:04:19	590	-3.5	-4.9	-1.5	24	16.70
12-10-jan	23:04:19	590	-3.2	-5.0	-1.8	24	16.71

BGI PQ200 Air Sampling System

Downloaded 2012 18 jan 14:08:54

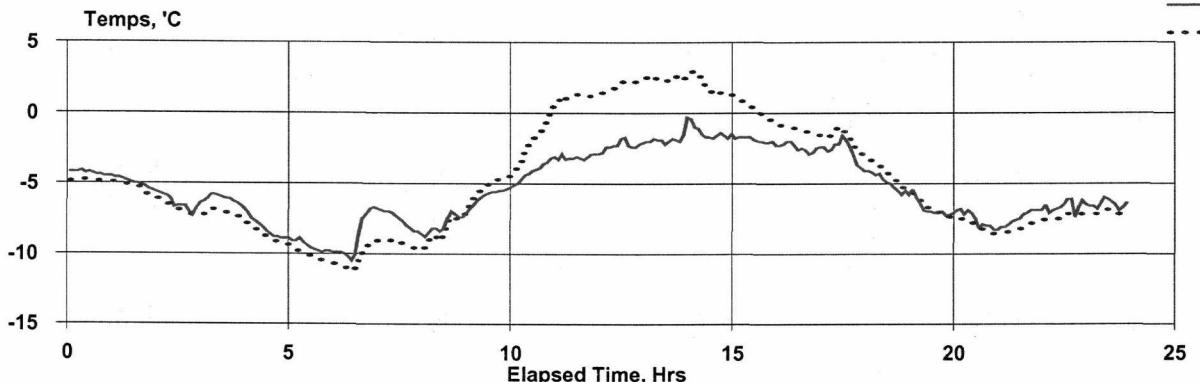
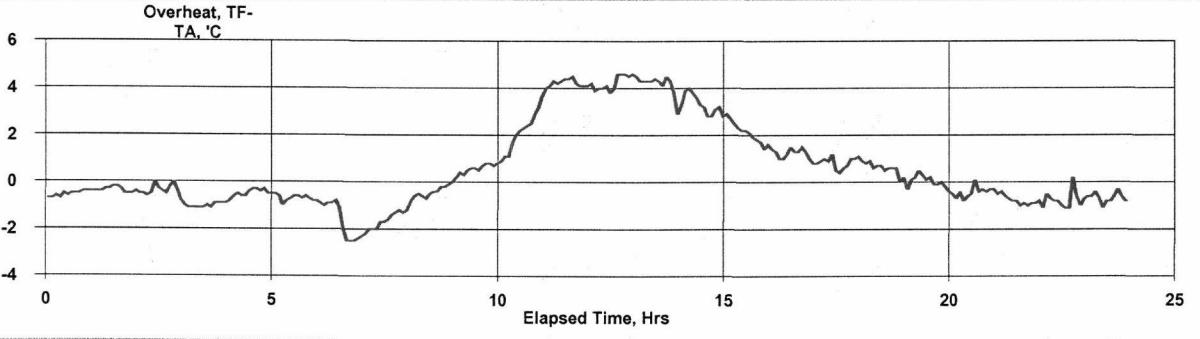
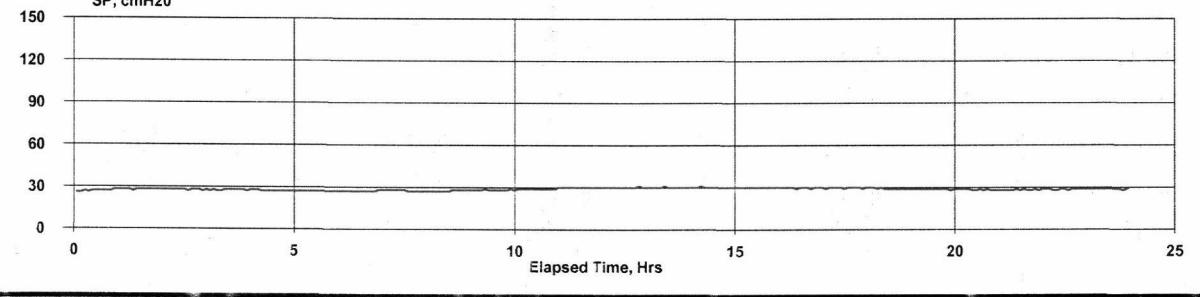
Job Details:				Job Code: Site Name: 963b Station Code: Operators: KN User1: User2:
Job Name: 12Jan18B.JOB Version: 5.62 Serial No: 963 Pump Time: 1438:12 Flags:				
BP	Max 589	Min 584	Avg 585	Units mmHg
TA	2.7	-11.2	-2.1	°C
Q	---	---	16.71	Lpm
QCV 0.56 %				
Max overheat 2.3 °C occured 17-jan 17:50:00				
				Timer Information: Date dd-mmm Time hh:mm:ss Start: 12-16-jan 0:00:08 Stop: 12-17-jan 0:00:05 ET: 23:59
				Mass Concentration Data: Filter ID: 22 mg Final Wt: mg Initial Wt: mg Delta Wt: 0.000 mg Total Vol: 24.037 m³ Mass Conc: 0 µg/m³
Notes 1: Notes 2:				
<p>Temps, °C</p> <p>Elapsed Time, Hrs</p>				
<p>Overheat, TF - TA, °C</p> <p>Elapsed Time, Hrs</p>				
<p>SP, cmH2O</p> <p>Elapsed Time, Hrs</p>				

Hourly

12-16-jan	0:05:08	586	-0.1	-0.9	-0.8	21	16.71
12-16-jan	1:05:08	585	-0.3	-0.9	-0.6	22	16.72
12-16-jan	2:05:08	585	-0.4	-1.1	-0.7	22	16.72
12-16-jan	3:05:08	585	-0.6	-1.2	-0.6	22	16.73
12-16-jan	4:05:08	584	-1.1	-1.8	-0.7	22	16.70
12-16-jan	5:05:08	584	-1.7	-2.6	-0.9	22	16.71
12-16-jan	6:05:08	584	-1.7	-2.5	-0.8	22	16.71
12-16-jan	7:05:08	584	-1.6	-2.2	-0.6	22	16.71
12-16-jan	8:05:08	584	-1.7	-2.1	-0.5	22	16.71
12-16-jan	9:05:08	585	-1.5	-1.9	-0.4	22	16.71
12-16-jan	10:05:08	585	-0.6	-0.8	-0.2	22	16.71
12-16-jan	11:05:08	585	0.2	0.0	-0.2	23	16.70
12-16-jan	12:05:08	585	0.4	0.5	0.1	23	16.69
12-16-jan	13:05:08	584	1.2	1.3	0.1	23	16.71
12-16-jan	14:05:08	584	1.6	2.0	0.4	23	16.70
12-16-jan	15:05:08	585	0.9	1.2	0.3	23	16.71
12-16-jan	16:05:08	586	-1.2	-0.8	0.4	23	16.72
12-16-jan	17:05:08	586	-2.0	-2.2	-0.2	23	16.72
12-16-jan	18:05:08	587	-3.3	-4.5	-1.2	22	16.71
12-16-jan	19:05:08	587	-3.6	-5.6	-2.0	22	16.71
12-16-jan	20:05:08	588	-5.8	-7.0	-1.2	22	16.70
12-16-jan	21:05:08	588	-9.1	-10.0	-0.9	21	16.72
12-16-jan	22:05:08	589	-10.1	-11.6	-1.6	21	16.72
12-16-jan	23:05:08	589	-10.5	-12.3	-1.8	21	16.74

BGI PQ200 Air Sampling System

Downloaded 2012 23 jan 10:31:27

Job Details:																							
Job Name: 12Jan23B.JOB Version: 5.62 Serial No: 963 Pump Time: 1462:11 Flags:		Job Code: Site Name: 963B Station Code: Operators: KN User1: User2:																					
<table border="1"> <tr><td>BP</td><td>Max</td><td>Min</td><td>Avg</td><td>Units</td></tr> <tr><td></td><td>590</td><td>582</td><td>588</td><td>mmHg</td></tr> <tr><td>TA</td><td>0.1</td><td>-10.6</td><td>-5.3</td><td>°C</td></tr> <tr><td>Q</td><td>---</td><td>---</td><td>16.71</td><td>Lpm</td></tr> </table> QCV 0.53 %		BP	Max	Min	Avg	Units		590	582	588	mmHg	TA	0.1	-10.6	-5.3	°C	Q	---	---	16.71	Lpm	Timer Information: Date dd-mmm Time hh:mm:ss Start: 12-22-jan 0:00:08 Stop: 12-23-jan 0:00:05 ET: 23:59	
BP	Max	Min	Avg	Units																			
	590	582	588	mmHg																			
TA	0.1	-10.6	-5.3	°C																			
Q	---	---	16.71	Lpm																			
Max overheat 5.2 °C occurred 22-jan 12:43:07		Mass Concentration Data: Filter ID: 28 Final Wt: mg Initial Wt: mg Delta Wt: 0.000 mg Total Vol: 24.037 m³ Mass Conc: 0 µg/m³																					
Notes 1: Notes 2:																							
 <p>Temps, °C</p> <p>Legend: TA (solid line), TF (dashed line)</p> <p>Elapsed Time, Hrs</p>																							
 <p>Overheat, TF - TA, °C</p> <p>Elapsed Time, Hrs</p>																							
 <p>SP, cmH2O</p> <p>Elapsed Time, Hrs</p>																							

Hourly

12-22-jan	0:05:08	584	-4.3	-4.9	-0.5	27	16.70
12-22-jan	1:05:08	585	-5.0	-5.4	-0.4	28	16.73
12-22-jan	2:05:08	586	-6.5	-6.9	-0.4	28	16.72
12-22-jan	3:05:08	586	-6.2	-7.2	-1.0	28	16.72
12-22-jan	4:05:08	586	-8.3	-8.8	-0.5	27	16.71
12-22-jan	5:05:08	587	-9.5	-10.2	-0.7	27	16.72
12-22-jan	6:05:08	587	-8.7	-10.3	-1.7	27	16.72
12-22-jan	7:05:08	587	-7.7	-9.3	-1.6	28	16.72
12-22-jan	8:05:08	588	-7.8	-8.2	-0.4	28	16.72
12-22-jan	9:05:08	589	-5.8	-5.3	0.6	28	16.69
12-22-jan	10:05:08	589	-4.1	-1.9	2.2	29	16.70
12-22-jan	11:05:08	589	-3.1	1.1	4.2	30	16.72
12-22-jan	12:05:08	589	-2.3	2.0	4.2	30	16.72
12-22-jan	13:05:08	589	-1.8	2.4	4.2	30	16.72
12-22-jan	14:05:08	589	-1.4	1.9	3.3	30	16.71
12-22-jan	15:05:08	589	-1.9	0.2	2.1	30	16.71
12-22-jan	16:05:08	589	-2.4	-1.2	1.2	30	16.71
12-22-jan	17:05:08	589	-2.7	-1.9	0.8	30	16.71
12-22-jan	18:05:08	590	-5.0	-4.4	0.6	29	16.71
12-22-jan	19:05:08	590	-6.8	-6.8	0.0	29	16.71
12-22-jan	20:05:08	589	-7.6	-8.0	-0.4	29	16.71
12-22-jan	21:05:08	590	-7.4	-8.2	-0.8	28	16.71
12-22-jan	22:05:08	590	-6.6	-7.4	-0.8	29	16.72
12-22-jan	23:05:08	590	-6.5	-7.1	-0.7	29	16.71

BGI PQ200 Air Sampling System

Downloaded 2012_30 jan_10:07:18

Job Details:

Job Name: 12Jan30B.JOB

Version: 5.62

Serial No: 963

Pump Time: 1486:10

Flags:

Job Code:

Site Name: 963B

Station Code:

Operators: KN

User1:

User2:

	Max	Min	Avg	Units
BP	598	593	596	mmHg
TA	7	-11.5	-2.4	°C
Q	---	---	16.71	Lpm

QCV 0.54 %

 Max overheat 3.3 °C
 occurred 28-jan 13:49:37

Timer Information:

Date dd-mmm Time hh:mm:ss

Start: 12-28-jan 0:00:08

Stop: 12-29-jan 0:00:04

ET: 23:59

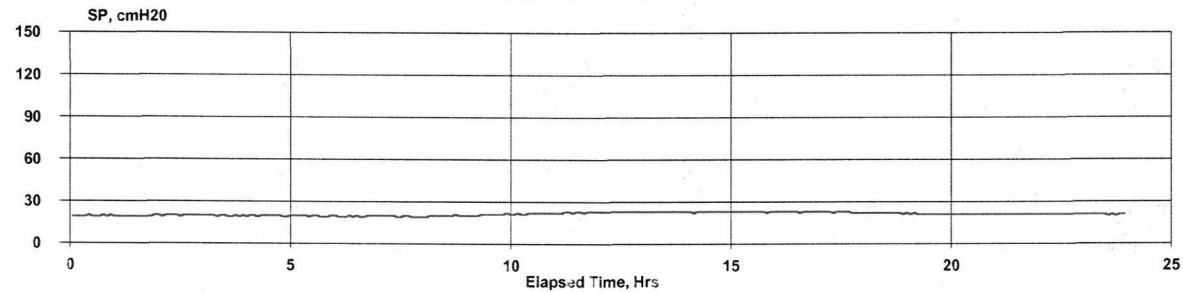
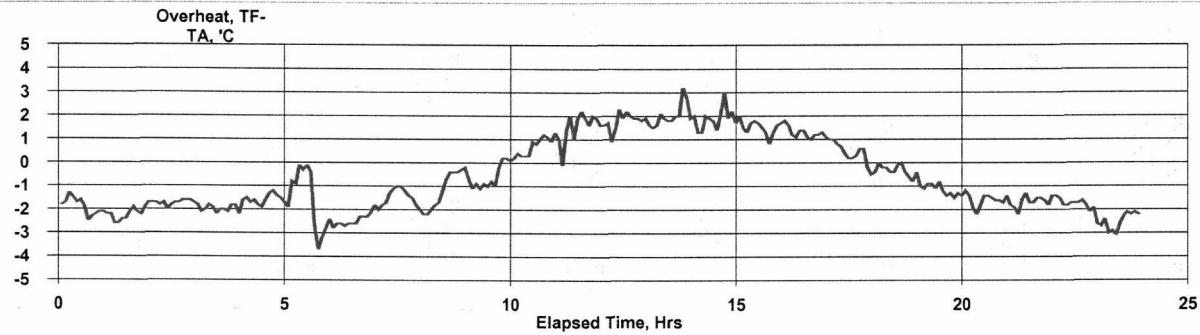
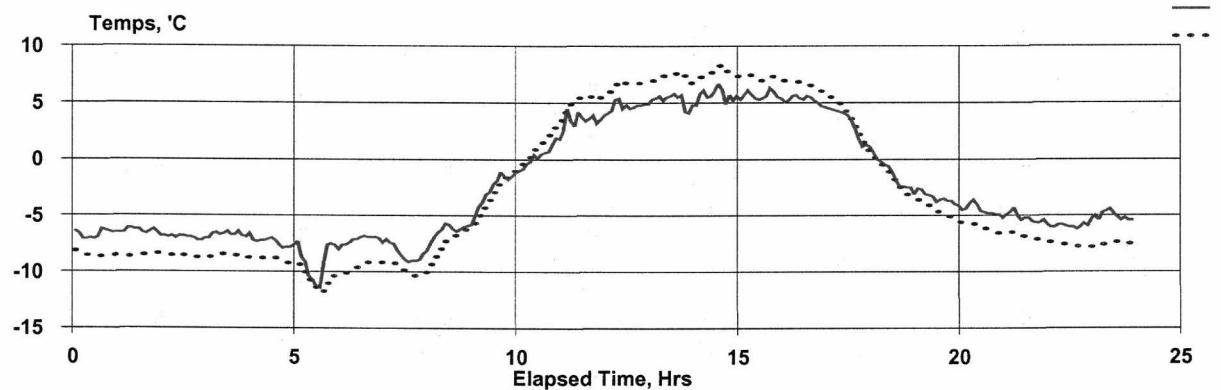
Mass Concentration Data:

 Filter ID: 25
 Final Wt: mg
 Initial Wt: mg
 Delta Wt: 0.000 mg
 Total Vol: 24.039 m³

Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



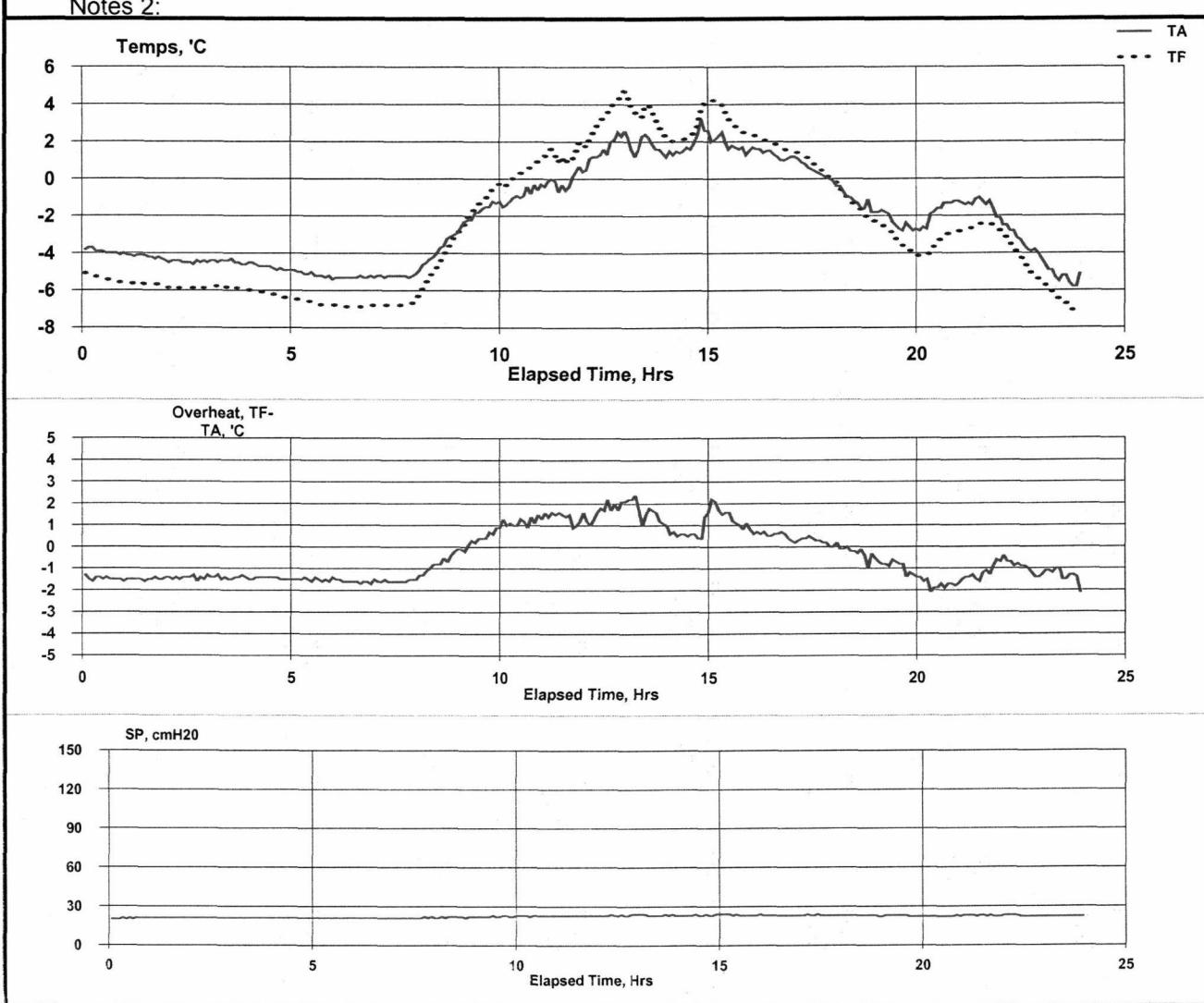
Hourly

12-28-jan	0:05:08	595	-6.7	-8.6	-1.9	19	16.71
12-28-jan	1:05:08	595	-6.4	-8.6	-2.2	19	16.71
12-28-jan	2:05:08	595	-6.9	-8.7	-1.7	20	16.72
12-28-jan	3:05:08	595	-6.7	-8.6	-2.0	20	16.71
12-28-jan	4:05:08	595	-7.4	-9.0	-1.6	20	16.71
12-28-jan	5:05:08	595	-9.1	-10.7	-1.6	20	16.72
12-28-jan	6:05:08	596	-7.1	-9.6	-2.4	20	16.71
12-28-jan	7:05:08	596	-8.3	-9.8	-1.5	20	16.71
12-28-jan	8:05:08	596	-6.3	-7.4	-1.1	20	16.70
12-28-jan	9:05:08	597	-2.5	-3.1	-0.6	21	16.72
12-28-jan	10:05:08	597	0.4	1.1	0.7	22	16.72
12-28-jan	11:05:08	597	3.6	5.1	1.5	23	16.70
12-28-jan	12:05:08	597	4.7	6.5	1.8	23	16.70
12-28-jan	13:05:08	597	5.2	7.2	2.0	23	16.71
12-28-jan	14:05:08	597	5.7	7.6	1.9	23	16.71
12-28-jan	15:05:08	597	5.6	7.2	1.5	23	16.71
12-28-jan	16:05:08	596	5.2	6.5	1.3	23	16.71
12-28-jan	17:05:08	596	3.1	3.5	0.4	23	16.71
12-28-jan	18:05:08	597	-1.4	-1.7	-0.3	22	16.71
12-28-jan	19:05:08	597	-3.4	-4.6	-1.2	21	16.72
12-28-jan	20:05:08	597	-4.5	-6.1	-1.6	21	16.71
12-28-jan	21:05:08	597	-5.2	-6.9	-1.7	21	16.72
12-28-jan	22:05:08	597	-5.9	-7.7	-1.8	21	16.70
12-28-jan	23:05:08	597	-5.0	-7.5	-2.5	21	16.71

BGI PQ200 Air Sampling System

Downloaded 2012 06 feb 12:37:24

Job Details:				Job Code:				
Job Name: 12Feb06B.JOB				Site Name: 963B				
Version: 5.62				Station Code:				
Serial No: 963				Operators: KN				
Pump Time: 1510:10				User1:				
Flags:				User2:				
BP	Max	Min	Avg	Units	Timer Information:		Mass Concentration Data:	
BP	591	586	589	mmHg	Date	Time	Filter ID:	4
TA	3.5	-6	-2	°C	dd-mmm	hh:mm:ss	Final Wt:	mg
Q	---	---	16.71	Lpm	Start: 12-03-feb	0:00:08	Initial Wt:	mg
QCV	0.55 %				Stop: 12-04-feb	0:00:05	Delta Wt:	0.000 mg
Max overheat	2.6 °C				ET: 24:00:00		Total Vol:	24.041 m^3
occured 03-feb 13:13:55							Mass Conc:	0 µg/m3
Notes 1: Notes 2:								



Hourly

12-03-feb	0:05:13	588	-3.9	-5.4	-1.5	21	16.70
12-03-feb	1:05:13	588	-4.2	-5.7	-1.5	21	16.71
12-03-feb	2:05:13	588	-4.5	-5.9	-1.4	21	16.71
12-03-feb	3:05:13	588	-4.5	-5.9	-1.4	21	16.71
12-03-feb	4:05:13	588	-4.8	-6.2	-1.4	21	16.70
12-03-feb	5:05:13	588	-5.1	-6.6	-1.5	21	16.72
12-03-feb	6:05:13	589	-5.3	-6.9	-1.6	21	16.71
12-03-feb	7:05:13	589	-5.2	-6.8	-1.6	21	16.71
12-03-feb	8:05:13	589	-3.8	-4.6	-0.8	22	16.71
12-03-feb	9:05:13	590	-1.8	-1.4	0.4	22	16.71
12-03-feb	10:05:13	590	-0.9	0.3	1.2	23	16.71
12-03-feb	11:05:13	590	-0.1	1.3	1.4	23	16.71
12-03-feb	12:05:13	590	1.6	3.3	1.7	23	16.72
12-03-feb	13:05:13	589	1.8	3.4	1.6	23	16.72
12-03-feb	14:05:13	589	1.9	2.6	0.7	23	16.71
12-03-feb	15:05:13	590	1.8	3.2	1.4	23	16.71
12-03-feb	16:05:13	590	1.3	1.9	0.6	23	16.71
12-03-feb	17:05:13	590	0.5	0.8	0.3	23	16.72
12-03-feb	18:05:13	590	-1.2	-1.4	-0.3	23	16.71
12-03-feb	19:05:13	591	-2.3	-3.3	-1.0	23	16.71
12-03-feb	20:05:13	591	-1.8	-3.5	-1.7	22	16.70
12-03-feb	21:05:13	591	-1.4	-2.6	-1.2	23	16.70
12-03-feb	22:05:13	591	-3.4	-4.3	-1.0	22	16.71
12-03-feb	23:05:13	591	-5.3	-6.6	-1.3	22	16.70

BGI PQ200 Air Sampling System

Downloaded 2012 11 feb 09:26:21

Job Details:		Job Code: Site Name: 963B Station Code: Operators: KN User1: User2:				
Job Name: 12Feb11B.JOB Version: 5.62 Serial No: 963 Pump Time: 1534:10 Flags:						
BP	Max 595	Min 593	Avg 593 mmHg	Timer Information:	Mass Concentration Data:	
TA	9.8	-4.9	2.1 °C	Date dd-mmm Start: 12-09-feb	Time hh:mm:ss Stop: 12-10-feb	Filter ID: 8 mg
Q	---	---	16.71 Lpm	ET: 24:00:00	Total Vol: 24.043 m³	Initial Wt: mg
QCV 0.56 %				Mass Conc: 0 µg/m³	Delta Wt: 0.000 mg	
Max overheat 2.7 °C occured 09-feb 15:14:19					Final Wt: mg	
					User2: mg	
Notes 1: Notes 2:						
<p>Temps, °C</p> <p>TA</p> <p>TF</p> <p>Elapsed Time, Hrs</p>						
<p>Overheat, TF - TA, °C</p> <p>Elapsed Time, Hrs</p>						
<p>SP, cmH2O</p> <p>Elapsed Time, Hrs</p>						

Hourly

12-09-feb	0:05:00	594	1.4	-0.9	-2.3	18	16.71
12-09-feb	1:05:00	594	0.8	-0.9	-1.7	19	16.72
12-09-feb	2:05:00	594	-1.2	-2.4	-1.2	19	16.71
12-09-feb	3:05:00	594	-2.3	-3.7	-1.4	19	16.71
12-09-feb	4:05:00	594	-2.9	-4.3	-1.5	18	16.71
12-09-feb	5:05:00	594	-3.5	-4.8	-1.4	18	16.71
12-09-feb	6:05:00	594	-4.3	-5.7	-1.3	18	16.71
12-09-feb	7:05:00	594	-3.4	-5.6	-2.2	18	16.72
12-09-feb	8:05:00	594	-0.9	-2.3	-1.4	19	16.72
12-09-feb	9:05:00	594	2.2	0.9	-1.3	20	16.71
12-09-feb	10:05:00	594	5.2	4.7	-0.5	20	16.71
12-09-feb	11:05:00	594	7.3	8.5	1.2	21	16.71
12-09-feb	12:05:00	594	7.7	9.2	1.5	21	16.71
12-09-feb	13:05:00	594	7.7	9.0	1.3	21	16.71
12-09-feb	14:05:00	593	9.1	11.0	1.9	22	16.71
12-09-feb	15:05:00	594	8.8	10.6	1.9	22	16.72
12-09-feb	16:05:00	594	7.5	8.6	1.1	21	16.71
12-09-feb	17:05:00	594	6.5	6.8	0.4	21	16.71
12-09-feb	18:05:00	594	3.6	3.7	0.2	21	16.71
12-09-feb	19:05:00	594	1.8	1.6	-0.3	20	16.72
12-09-feb	20:05:00	594	0.5	-0.3	-0.7	20	16.71
12-09-feb	21:05:00	594	0.4	-1.2	-1.6	20	16.73
12-09-feb	22:05:00	594	-1.5	-2.7	-1.2	20	16.70
12-09-feb	23:05:00	594	-1.1	-3.0	-1.9	19	16.71

BGI PQ200 Air Sampling System

Downloaded 2012 17 feb 10:42:00

Job Details:

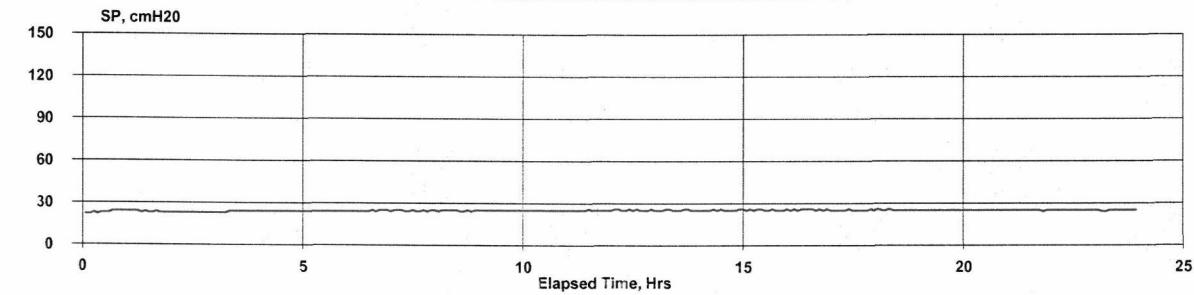
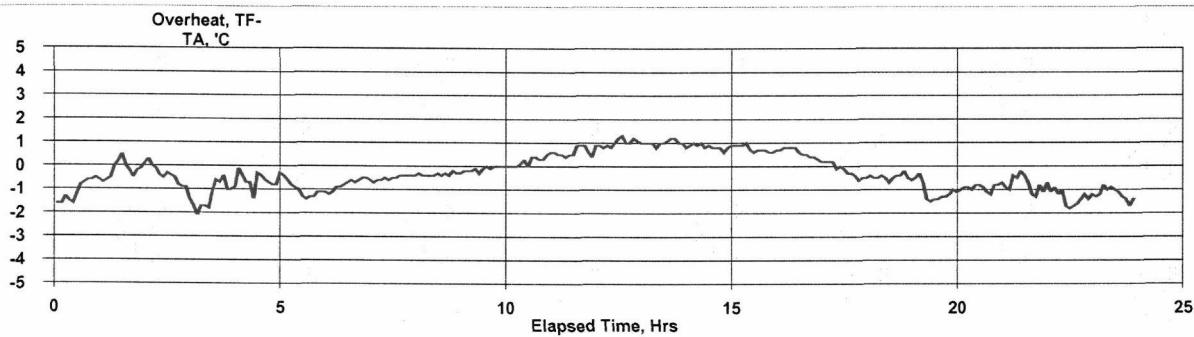
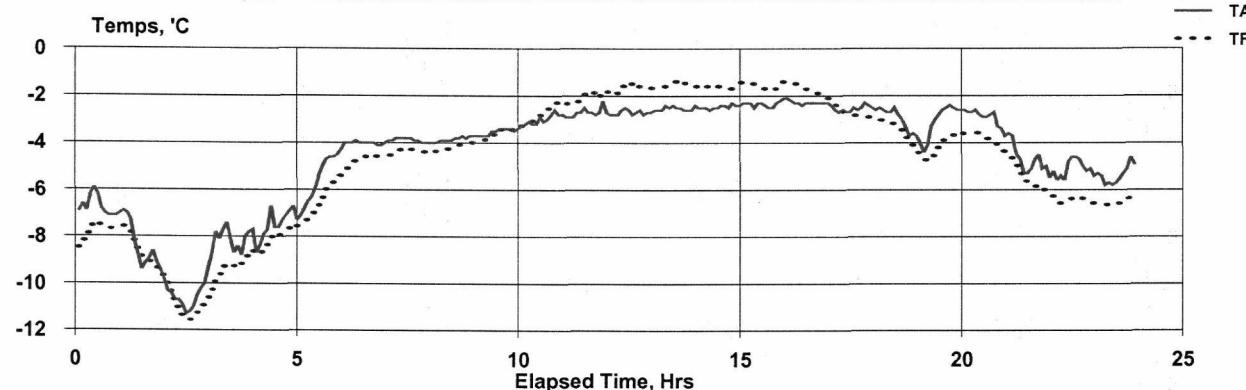
Job Name: 12Feb17B.JOB
 Version: 5.62
 Serial No: 963
 Pump Time: 1558:09
 Flags:

Job Code:
 Site Name: 963B
 Station Code:
 Operators: KN
 User1:
 User2:

	Max	Min	Avg	Units	Timer Information:		Mass Concentration Data:	
BP	588	583	585	mmHg			Filter ID:	12
TA	-2	-11.3	-4.4	°C	Date	Time	Final Wt:	mg
Q	---	---	16.71	Lpm	dd-mmm	hh:mm:ss	Initial Wt:	mg
QCV			0.61 %	Start: 12-15-feb 0:00:08		Stop: 12-16-feb 0:00:05		Delta Wt: 0.000 mg
Max overheat	2.3 °C		ET: 23:59		Total Vol: 24.043 m³		Mass Conc: 0 µg/m³	
occured 16-feb 15:28:13								

Notes 1:

Notes 2:



Hourly

12-15-feb	0:05:08	585	-6.7	-7.8	-1.1	23	16.70
12-15-feb	1:05:08	585	-8.5	-8.7	-0.2	23	16.71
12-15-feb	2:05:08	585	-10.5	-11.0	-0.5	23	16.72
12-15-feb	3:05:08	585	-8.1	-9.3	-1.2	24	16.72
12-15-feb	4:05:08	585	-7.5	-8.1	-0.6	24	16.71
12-15-feb	5:05:08	585	-5.5	-6.5	-1.0	24	16.71
12-15-feb	6:05:08	585	-4.0	-4.8	-0.8	24	16.71
12-15-feb	7:05:08	585	-3.9	-4.4	-0.5	25	16.73
12-15-feb	8:05:08	586	-3.8	-4.2	-0.3	25	16.73
12-15-feb	9:05:08	586	-3.5	-3.6	-0.1	25	16.71
12-15-feb	10:05:08	586	-3.0	-2.8	0.2	25	16.71
12-15-feb	11:05:08	586	-2.7	-2.1	0.6	25	16.72
12-15-feb	12:05:08	586	-2.7	-1.7	1.0	25	16.71
12-15-feb	13:05:08	586	-2.5	-1.5	1.0	25	16.71
12-15-feb	14:05:08	586	-2.5	-1.6	0.9	25	16.72
12-15-feb	15:05:08	586	-2.3	-1.6	0.7	25	16.71
12-15-feb	16:05:08	586	-2.3	-1.7	0.6	26	16.71
12-15-feb	17:05:08	586	-2.5	-2.7	-0.2	25	16.72
12-15-feb	18:05:08	586	-3.0	-3.4	-0.5	25	16.71
12-15-feb	19:05:08	587	-3.1	-4.2	-1.1	25	16.71
12-15-feb	20:05:08	587	-2.9	-3.8	-0.9	25	16.72
12-15-feb	21:05:08	588	-4.8	-5.5	-0.8	25	16.71
12-15-feb	22:05:08	588	-5.1	-6.5	-1.4	25	16.71
12-15-feb	23:05:08	588	-5.4	-6.6	-1.2	25	16.71

BGI PQ200 Air Sampling System

Downloaded 2012 24 feb 12:23:51

Job Details:				Job Code: Site Name: 963B Station Code: Operators: KN User1: User2:	
Job Name: 12Feb24B.JOB Version: 5.62 Serial No: 963 Pump Time: 1582:08 Flags:					
BP	Max 593	Min 588	Avg 591	Units mmHg	
TA	9.1	-10	-1.2	°C	
Q	---	---	16.71	Lpm	
QCV 0.57 %				Timer Information:	
				Date dd-mmm Start: 12-21-feb	Time hh:mm:ss 0:00:08
				Stop: 12-22-feb	0:00:04
Max overheat 3.9 °C occured 21-feb 12:31:29				ET: 23:59	Mass Conc: 0 µg/m³
Notes 1: Notes 2:					
<p>Temps, °C</p> <p>TA</p> <p>TF</p> <p>Elapsed Time, Hrs</p>					
<p>Overheat, TF - TA, °C</p> <p>Elapsed Time, Hrs</p>					
<p>SP, cmH2O</p> <p>Elapsed Time, Hrs</p>					

Hourly

12-21-feb	0:05:08	590	-8.5	-10.3	-1.8	20	16.71
12-21-feb	1:05:08	590	-8.9	-10.6	-1.7	20	16.72
12-21-feb	2:05:08	590	-8.9	-11.1	-2.2	20	16.71
12-21-feb	3:05:08	590	-8.8	-10.8	-1.9	20	16.71
12-21-feb	4:05:08	590	-8.4	-10.2	-1.8	20	16.71
12-21-feb	5:05:08	591	-8.5	-10.4	-1.8	20	16.71
12-21-feb	6:05:08	591	-8.8	-10.5	-1.7	20	16.72
12-21-feb	7:05:08	591	-7.8	-9.8	-1.9	20	16.71
12-21-feb	8:05:08	591	-4.2	-5.5	-1.4	21	16.71
12-21-feb	9:05:08	592	0.3	0.1	-0.2	22	16.72
12-21-feb	10:05:08	592	2.6	3.9	1.4	23	16.71
12-21-feb	11:05:08	592	5.3	7.6	2.4	23	16.71
12-21-feb	12:05:08	592	6.1	9.1	3.0	24	16.71
12-21-feb	13:05:08	591	6.4	8.8	2.4	24	16.71
12-21-feb	14:05:08	591	7.4	9.8	2.4	24	16.70
12-21-feb	15:05:08	591	6.6	8.3	1.7	24	16.70
12-21-feb	16:05:08	591	5.7	7.0	1.2	24	16.70
12-21-feb	17:05:08	592	4.0	4.2	0.2	23	16.71
12-21-feb	18:05:08	592	1.3	1.3	0.0	23	16.72
12-21-feb	19:05:08	592	-1.0	-1.6	-0.6	23	16.72
12-21-feb	20:05:08	592	-1.2	-2.4	-1.3	23	16.72
12-21-feb	21:05:08	593	-0.4	-1.4	-1.0	23	16.72
12-21-feb	22:05:08	593	0.2	-0.9	-1.1	23	16.72
12-21-feb	23:05:08	593	-0.1	-1.4	-1.3	23	16.71

BGI PQ200 Air Sampling System

Downloaded 2012 28 feb 11:54:07

Job Details:

Job Name: 12Feb28B.JOB

Version: 5.62

Serial No: 963

Pump Time: 1606:07

Flags:

Job Code:

Site Name:

Station Code:

Operators:

User1:

User2:

	Max	Min	Avg	Units
BP	586	580	583	mmHg
TA	6.2	-2.4	1.9	°C
Q	---	---	16.71	Lpm

QCV 0.57 %

 Max overheat 1.5 °C
 occurred 27-feb 10:07:04

Timer Information:

Date	Time
dd-mmm	hh:mm:ss
Start: 12-27-feb	0:00:08
Stop: 12-28-feb	0:00:05
ET: 23:59	

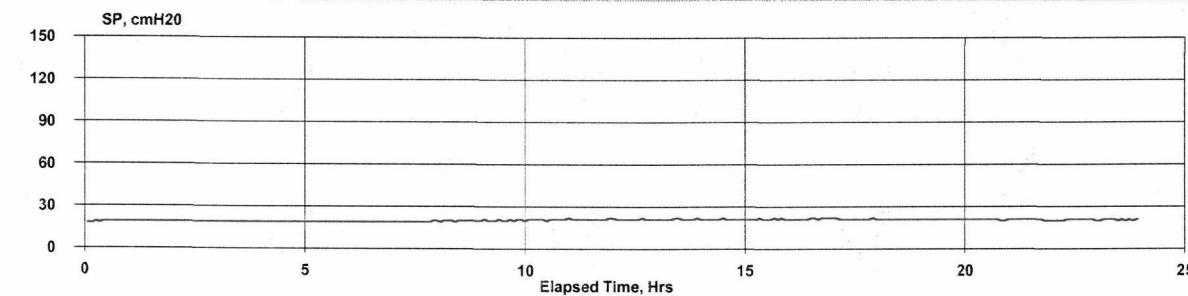
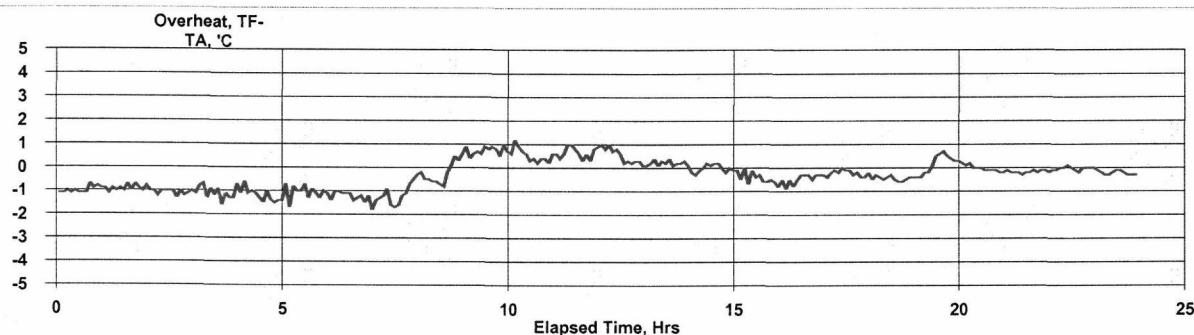
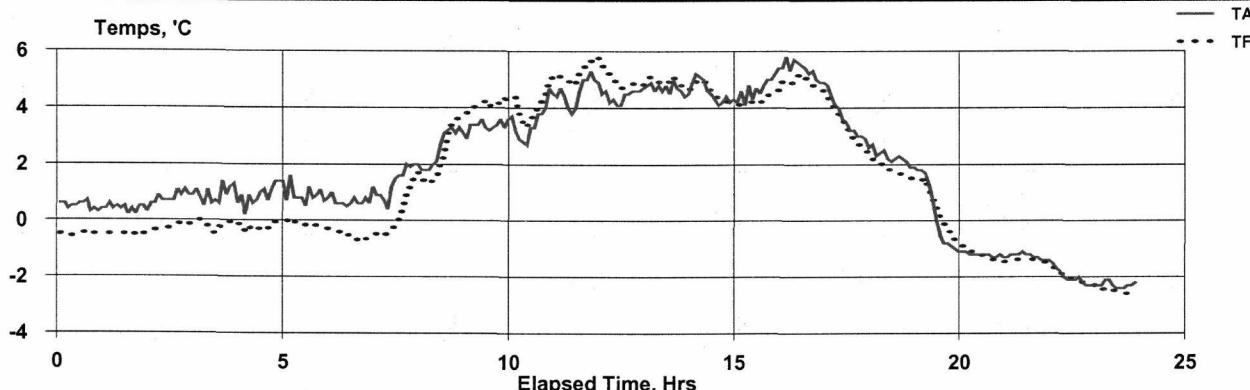
Mass Concentration Data:

Filter ID:	<input type="text"/>
Final Wt:	<input type="text"/> mg
Initial Wt:	<input type="text"/> mg
Delta Wt:	<input type="text"/> 0.000 mg
Total Vol:	<input type="text"/> 24.035 m^3

 Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



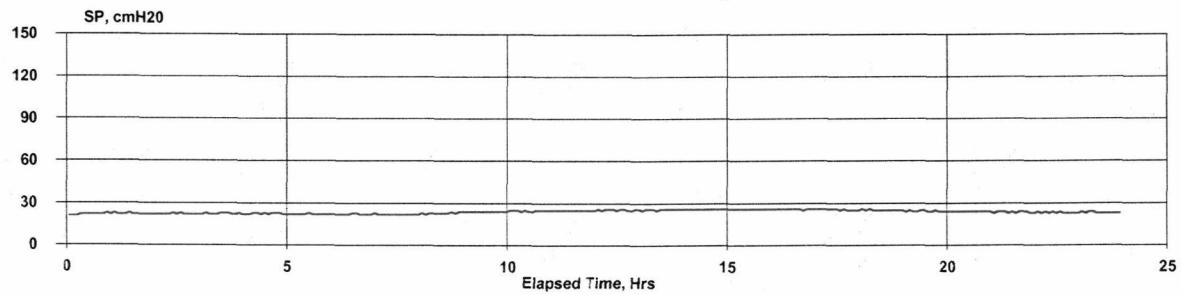
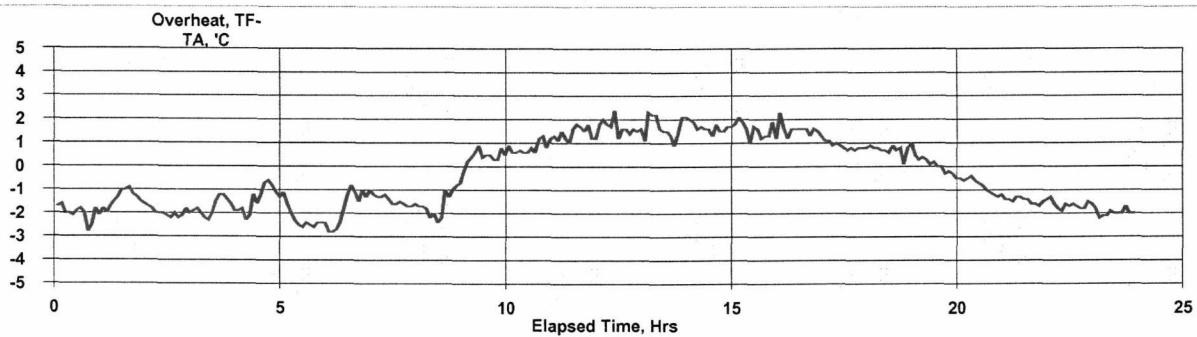
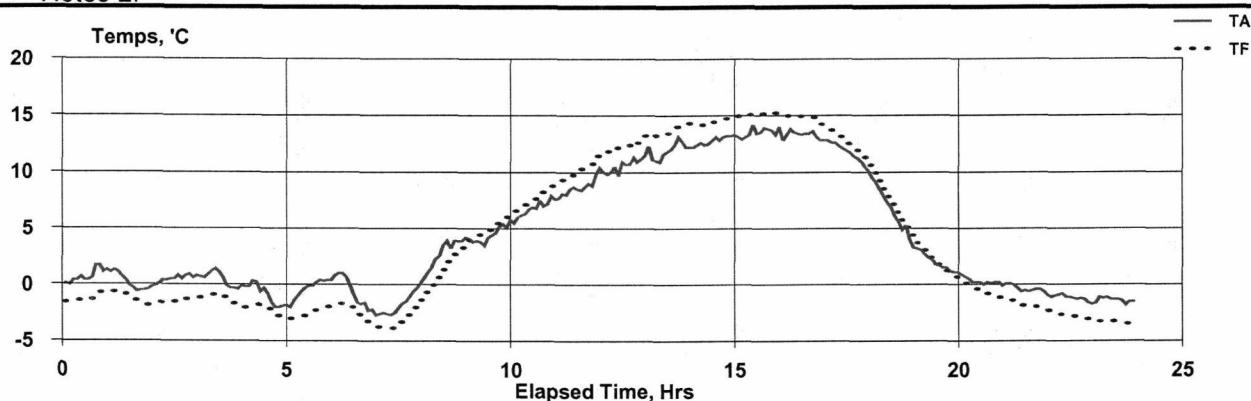
Hourly

12-27-feb	0:05:08	586	0.5	-0.5	-1.0	19	16.71
12-27-feb	1:05:08	585	0.4	-0.5	-0.9	19	16.72
12-27-feb	2:05:08	585	0.8	-0.3	-1.1	19	16.72
12-27-feb	3:05:08	584	0.9	-0.2	-1.1	19	16.72
12-27-feb	4:05:08	584	0.9	-0.3	-1.2	19	16.71
12-27-feb	5:05:08	584	0.9	-0.2	-1.1	19	16.70
12-27-feb	6:05:08	584	0.7	-0.6	-1.3	19	16.72
12-27-feb	7:05:08	585	1.4	0.3	-1.1	19	16.69
12-27-feb	8:05:08	585	2.6	2.4	-0.2	20	16.72
12-27-feb	9:05:08	585	3.4	4.1	0.7	20	16.71
12-27-feb	10:05:08	585	3.6	4.1	0.5	21	16.71
12-27-feb	11:05:08	584	4.6	5.3	0.7	21	16.72
12-27-feb	12:05:08	584	4.4	5.0	0.5	21	16.71
12-27-feb	13:05:08	582	4.7	4.9	0.2	21	16.71
12-27-feb	14:05:08	582	4.6	4.6	0.0	21	16.72
12-27-feb	15:05:08	581	4.7	4.3	-0.4	21	16.71
12-27-feb	16:05:08	581	5.3	4.9	-0.5	22	16.71
12-27-feb	17:05:08	581	3.5	3.3	-0.2	21	16.70
12-27-feb	18:05:08	582	2.2	1.8	-0.5	21	16.71
12-27-feb	19:05:08	582	0.2	0.4	0.2	21	16.72
12-27-feb	20:05:08	582	-1.2	-1.2	0.0	21	16.71
12-27-feb	21:05:08	582	-1.3	-1.4	-0.2	21	16.71
12-27-feb	22:05:08	581	-2.0	-2.1	0.0	21	16.71
12-27-feb	23:05:08	581	-2.3	-2.5	-0.2	21	16.72

BGI PQ200 Air Sampling System

Downloaded 2012 05 mar 15:12:15

Job Details:				Job Code:				
Job Name: 12Mar05B.JOB				Site Name: 963B				
Version: 5.62				Station Code:				
Serial No: 963				Operators: KN				
Pump Time: 1630:06				User1:				
Flags:				User2:				
BP	Max 596	Min 593	Avg 594	mmHg	Timer Information:		Mass Concentration Data:	
TA	14.3	-2.8	4.2	°C	Date dd-mmm	Time hh:mm:ss	Filter ID: 8	Final Wt: mg
Q	---	---	16.7	Lpm	Start: 12-04-mar	0:00:08	Initial Wt: mg	Delta Wt: 0.000 mg
QCV	0.53 %			Stop: 12-05-mar	0:00:05	Total Vol: 24.04 m^3	Mass Conc: 0 µg/m³	
Max overheat 2.5 °C occured 04-mar 12:24:42				ET: 23:59				
Notes 1: Notes 2:								



Hourly

12-04-mar	0:05:08	596	0.7	-1.3	-2.0	22	16.72
12-04-mar	1:05:08	595	0.2	-1.2	-1.4	22	16.71
12-04-mar	2:05:08	595	0.5	-1.5	-2.0	22	16.72
12-04-mar	3:05:08	595	0.4	-1.3	-1.8	22	16.72
12-04-mar	4:05:08	595	-0.9	-2.3	-1.4	23	16.71
12-04-mar	5:05:08	595	-0.3	-2.6	-2.2	22	16.72
12-04-mar	6:05:08	595	-0.8	-2.5	-1.7	22	16.71
12-04-mar	7:05:08	595	-1.7	-3.2	-1.5	22	16.70
12-04-mar	8:05:08	596	2.9	1.3	-1.6	23	16.71
12-04-mar	9:05:08	596	4.5	4.9	0.4	24	16.71
12-04-mar	10:05:08	596	6.8	7.6	0.8	25	16.71
12-04-mar	11:05:08	596	8.7	10.1	1.4	25	16.71
12-04-mar	12:05:08	595	10.6	12.3	1.7	26	16.71
12-04-mar	13:05:08	595	11.9	13.6	1.7	26	16.71
12-04-mar	14:05:08	594	12.8	14.5	1.7	26	16.71
12-04-mar	15:05:08	594	13.5	15.1	1.6	26	16.71
12-04-mar	16:05:08	594	13.3	14.8	1.6	26	16.71
12-04-mar	17:05:08	594	11.7	12.5	0.9	26	16.71
12-04-mar	18:05:08	594	6.5	7.3	0.7	25	16.72
12-04-mar	19:05:08	594	2.0	2.0	0.0	24	16.72
12-04-mar	20:05:08	594	0.3	-0.6	-0.8	24	16.71
12-04-mar	21:05:08	594	-0.4	-1.8	-1.5	24	16.71
12-04-mar	22:05:08	594	-1.2	-2.9	-1.7	23	16.72
12-04-mar	23:05:08	594	-1.4	-3.4	-2.0	23	16.71

BGI PQ200 Air Sampling System

Downloaded 2012 12 mar 09:29:05

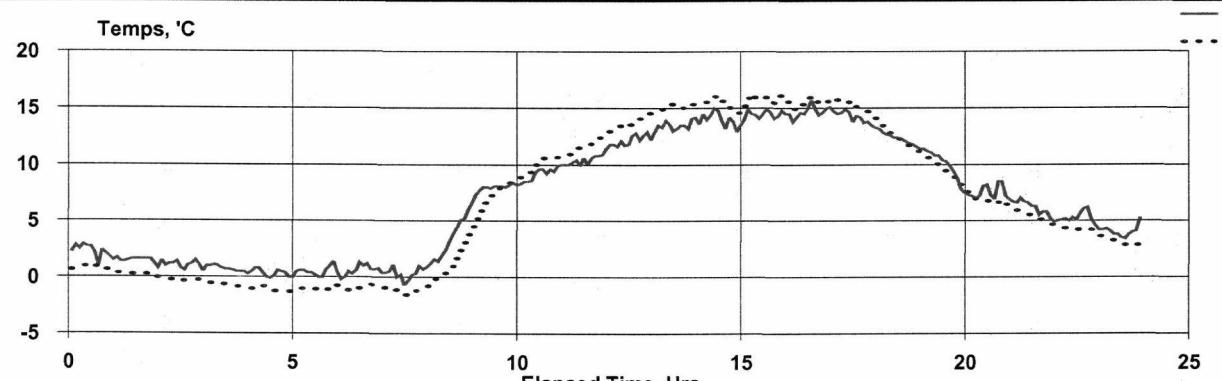
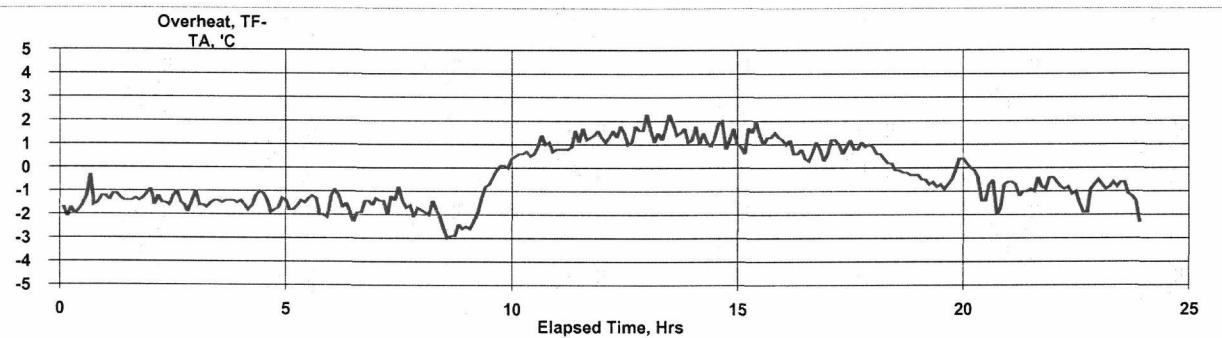
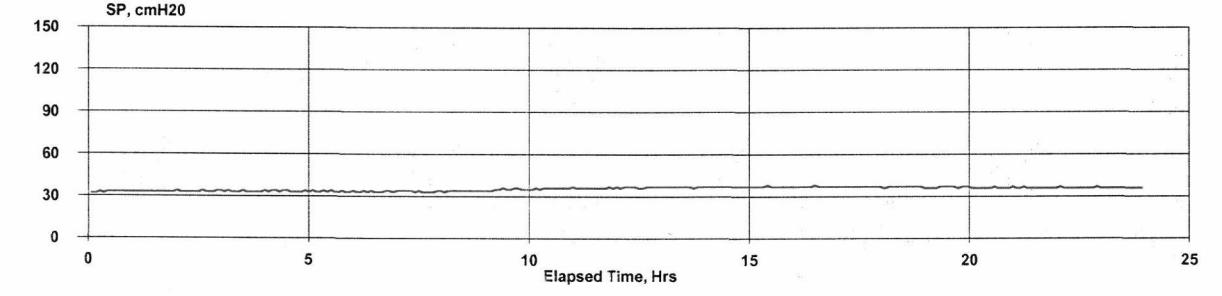
Job Details:		Job Code: Site Name: 963B Station Code: Operators: KN User1: User2:	
Job Name: 12Mar12B.JOB Version: 5.62 Serial No: 963 Pump Time: 1654:05 Flags:			
BP TA Q	Max 592 Min 587 Avg 589 Units mmHg	Timer Information: Date dd-mmm Time hh:mm:ss Start: 12-10-mar 0:00:08 Stop: 12-11-mar 0:00:04 ET: 23:59	Mass Concentration Data: Filter ID: 10 Final Wt: mg Initial Wt: mg Delta Wt: 0.000 mg Total Vol: 24.04 m^3 Mass Conc: 0 µg/m3
QCV 0.59 % Max overheat 2.7 °C occured 10-mar 14:30:50			
Notes 1: Notes 2:			
<p>Temps, °C</p> <p>Elapsed Time, Hrs</p> <p>Legend: TA (solid line), TF (dashed line)</p>			
<p>Overheat, TF - TA, °C</p> <p>Elapsed Time, Hrs</p>			
<p>SP, cmH2O</p> <p>Elapsed Time, Hrs</p>			

Hourly

12-10-mar	0:05:08	592	-2.7	-4.7	-2.0	18	16.71
12-10-mar	1:05:08	591	-3.7	-5.5	-1.8	18	16.71
12-10-mar	2:05:08	591	-4.2	-6.3	-2.0	18	16.72
12-10-mar	3:05:08	591	-4.3	-6.5	-2.2	18	16.72
12-10-mar	4:05:08	590	-4.8	-6.6	-1.9	18	16.71
12-10-mar	5:05:08	590	-4.8	-6.8	-2.0	18	16.71
12-10-mar	6:05:08	590	-5.0	-7.0	-2.0	18	16.71
12-10-mar	7:05:08	590	-2.2	-4.9	-2.7	18	16.71
12-10-mar	8:05:08	590	3.7	2.0	-1.6	20	16.70
12-10-mar	9:05:08	590	7.3	7.5	0.2	21	16.71
12-10-mar	10:05:08	590	8.8	10.4	1.6	22	16.71
12-10-mar	11:05:08	590	9.5	11.0	1.6	22	16.71
12-10-mar	12:05:08	590	10.3	12.0	1.7	22	16.71
12-10-mar	13:05:08	589	10.9	12.5	1.7	22	16.71
12-10-mar	14:05:08	589	11.4	13.4	2.0	22	16.70
12-10-mar	15:05:08	588	11.6	13.1	1.5	22	16.71
12-10-mar	16:05:08	588	11.5	12.8	1.2	22	16.71
12-10-mar	17:05:08	588	10.4	11.3	0.9	22	16.72
12-10-mar	18:05:08	588	6.2	6.8	0.6	21	16.71
12-10-mar	19:05:08	588	1.7	1.7	0.0	21	16.71
12-10-mar	20:05:08	588	0.1	-0.6	-0.7	20	16.71
12-10-mar	21:05:08	588	-1.0	-2.3	-1.3	20	16.72
12-10-mar	22:05:08	588	-0.9	-2.7	-1.8	20	16.71
12-10-mar	23:05:08	588	-1.5	-3.2	-1.7	20	16.71

BGI PQ200 Air Sampling System

Downloaded 2012 19 mar 10:42:30

Job Details:		Job Code: Site Name: 963BKN Station Code: Operators: User1: User2:	
Job Name: 12Mar19B.JOB Version: 5.62 Serial No: 963 Pump Time: 1678:04 Flags:			
BP TA Q	Max 591 Min 585 Avg 588 Units mmHg	Timer Information: Date dd-mmm Start: 12-16-mar Stop: 12-17-mar Time hh:mm:ss 0:00:08 ET: 23:59	Mass Concentration Data: Filter ID: 12 Final Wt: mg Initial Wt: mg Delta Wt: 0.000 mg Total Vol: 24.04 m^3 Mass Conc: 0 µg/m3
QCV 0.53 % Max overheat 2.8 °C occured 16-mar 13:29:16			
Notes 1: Notes 2: 			
			
			

Hourly

12-16-mar	0:05:08	590	2.2	0.8	-1.5	33	16.71
12-16-mar	1:05:08	590	1.5	0.2	-1.3	33	16.71
12-16-mar	2:05:08	590	1.1	-0.3	-1.4	33	16.70
12-16-mar	3:05:08	590	0.7	-0.8	-1.5	33	16.71
12-16-mar	4:05:08	589	0.3	-1.2	-1.5	33	16.71
12-16-mar	5:05:08	589	0.5	-1.1	-1.6	33	16.71
12-16-mar	6:05:08	589	0.6	-1.0	-1.6	33	16.71
12-16-mar	7:05:08	589	0.4	-1.2	-1.5	34	16.71
12-16-mar	8:05:08	589	3.6	1.2	-2.3	34	16.72
12-16-mar	9:05:08	589	8.0	7.2	-0.8	35	16.71
12-16-mar	10:05:08	589	9.2	10.0	0.8	36	16.71
12-16-mar	11:05:08	589	10.5	11.7	1.2	36	16.70
12-16-mar	12:05:08	589	12.2	13.7	1.5	37	16.71
12-16-mar	13:05:08	589	13.5	15.0	1.5	37	16.70
12-16-mar	14:05:08	588	14.0	15.3	1.4	37	16.71
12-16-mar	15:05:08	587	14.5	15.8	1.3	37	16.70
12-16-mar	16:05:08	587	14.7	15.4	0.7	37	16.70
12-16-mar	17:05:08	587	14.2	15.1	1.0	37	16.71
12-16-mar	18:05:08	587	12.3	12.3	0.0	37	16.70
12-16-mar	19:05:08	587	10.0	9.5	-0.4	37	16.71
12-16-mar	20:05:08	586	7.5	6.8	-0.8	36	16.72
12-16-mar	21:05:08	586	6.1	5.3	-0.8	36	16.71
12-16-mar	22:05:08	586	5.2	4.2	-1.1	36	16.72
12-16-mar	23:05:08	586	4.0	3.0	-1.0	36	16.71

BGI PQ200 Air Sampling System

Downloaded 2012 23 mar 13:02:29

Job Details:		Job Code: Site Name: 963B Station Code: Operators: KN User1: User2:					
Job Name: 12Mar23B.JOB Version: 5.62 Serial No: 963 Pump Time: 1702:03 Flags:							
BP	Max 590	Min 588	Avg 589	Units mmHg	Timer Information:	Mass Concentration Data:	
TA	16.6	-3.1	6.5	°C	Date dd-mmm Start: 12-22-mar	Time hh:mm:ss 0:00:08	Filter ID: 15
Q	---	---	16.7	Lpm	Stop: 12-23-mar	ET: 23:59	Final Wt: mg
QCV 0.32 %						Initial Wt: mg	
Max overheat 2.3 °C occured 22-mar 15:06:10						Delta Wt: 0.000 mg	
						Total Vol: 24.033 m^3	
Notes 1:						Mass Conc: 0 ug/m3	
Notes 2:							
<p>Temps, °C</p> <p>Legend: TA (solid line), TF (dashed line)</p> <p>Y-axis: -5 to 20</p> <p>X-axis: Elapsed Time, Hrs (0 to 25)</p>							
<p>Overheat, TF - TA, °C</p> <p>Y-axis: -5 to 5</p> <p>X-axis: Elapsed Time, Hrs (0 to 25)</p>							
<p>SP, cmH2O</p> <p>Y-axis: 0 to 150</p> <p>X-axis: Elapsed Time, Hrs (0 to 25)</p>							

Hourly

12-22-mar	0:05:08	590	0.4	-1.7	-2.1	27	16.71
12-22-mar	1:05:08	590	0.6	-1.6	-2.3	27	16.71
12-22-mar	2:05:08	590	-0.7	-2.4	-1.7	27	16.70
12-22-mar	3:05:08	590	-0.5	-2.8	-2.3	27	16.70
12-22-mar	4:05:08	589	-1.0	-3.0	-2.0	27	16.71
12-22-mar	5:05:08	589	-1.8	-3.9	-2.1	27	16.71
12-22-mar	6:05:08	590	-1.9	-3.9	-2.0	27	16.72
12-22-mar	7:05:08	590	-2.3	-4.4	-2.0	27	16.71
12-22-mar	8:05:08	590	1.4	-1.1	-2.5	28	16.71
12-22-mar	9:05:08	590	5.6	4.4	-1.2	29	16.71
12-22-mar	10:05:08	590	9.0	8.9	-0.1	30	16.73
12-22-mar	11:05:08	590	11.8	12.8	1.0	30	16.70
12-22-mar	12:05:08	590	13.0	14.4	1.4	31	16.71
12-22-mar	13:05:08	590	14.0	15.4	1.4	31	16.70
12-22-mar	14:05:08	589	14.9	16.4	1.5	31	16.70
12-22-mar	15:05:08	589	15.6	17.1	1.5	31	16.69
12-22-mar	16:05:08	589	16.1	17.5	1.4	31	16.72
12-22-mar	17:05:08	589	15.9	17.1	1.2	31	16.71
12-22-mar	18:05:08	589	15.4	16.2	0.8	31	16.69
12-22-mar	19:05:08	589	12.2	12.9	0.7	31	16.70
12-22-mar	20:05:08	589	6.0	6.6	0.6	30	16.71
12-22-mar	21:05:08	589	4.5	3.6	-0.9	30	16.71
12-22-mar	22:05:08	589	3.6	2.2	-1.4	30	16.70
12-22-mar	23:05:08	589	3.3	1.6	-1.7	29	16.71

BGI PQ200 Air Sampling System

Downloaded 2012 29 mar 12:05:36

Job Details:

Job Name: 12Mar29B.JOB
 Version: 5.62
 Serial No: 963
 Pump Time: 1726:02
 Flags:

Job Code:
 Site Name: 963B
 Station Code:
 Operators: KN
 User1:
 User2:

	Max	Min	Avg	Units
BP	591	587	589	mmHg
TA	15.3	-1.7	6.5	°C
Q	---	---	16.7	Lpm

QCV 0.49 %
 Max overheat 2.4 °C
 occurred 28-mar 12:31:32

Timer Information:

Date	Time
dd-mmm	hh:mm:ss
Start: 12-28-mar	0:00:08
Stop: 12-29-mar	0:00:04
ET: 23:59	

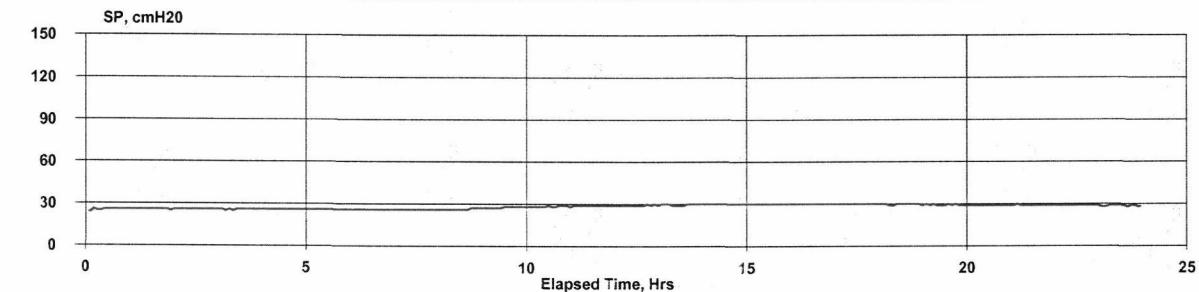
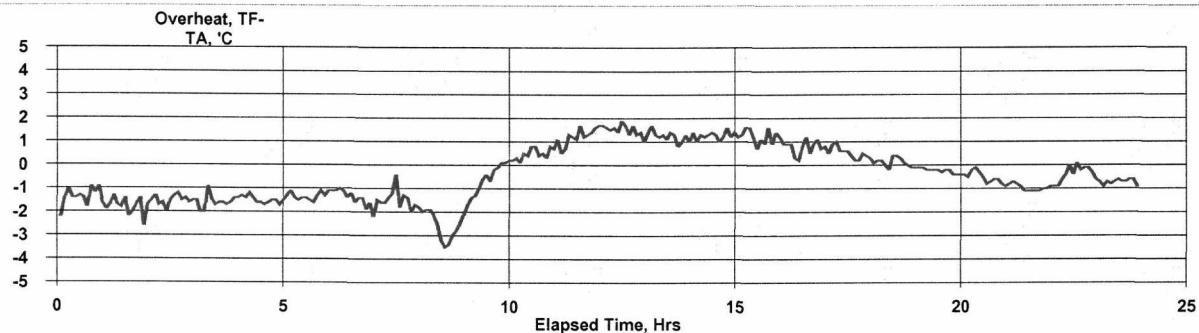
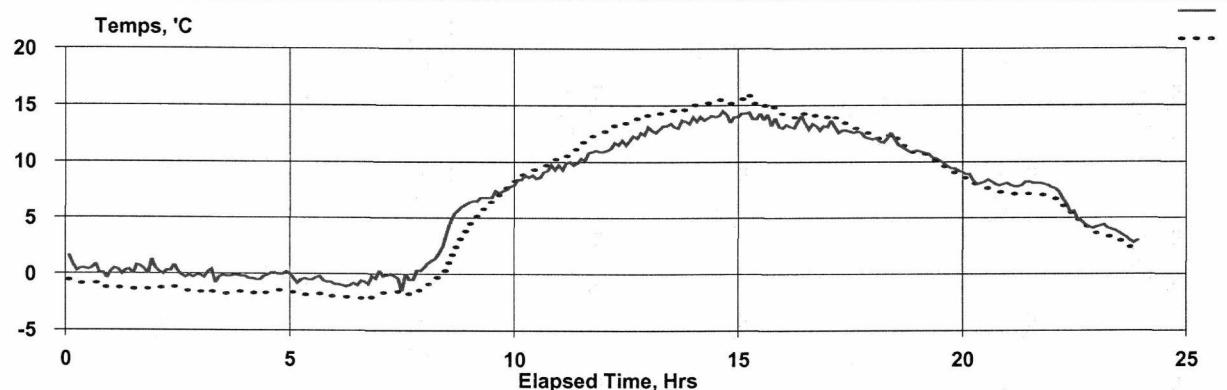
Mass Concentration Data:

Filter ID: 5
 Final Wt: mg
 Initial Wt: mg
 Delta Wt: 0.000 mg
 Total Vol: 24.037 m³

Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



Hourly

12-28-mar	0:05:08	590	0.5	-0.9	-1.4	26	16.71
12-28-mar	1:05:08	590	0.4	-1.3	-1.8	26	16.71
12-28-mar	2:05:08	590	0.1	-1.4	-1.5	26	16.71
12-28-mar	3:05:08	590	-0.2	-1.7	-1.6	26	16.71
12-28-mar	4:05:08	589	-0.1	-1.6	-1.5	26	16.71
12-28-mar	5:05:08	589	-0.5	-1.9	-1.3	26	16.70
12-28-mar	6:05:08	589	-0.7	-2.1	-1.4	26	16.71
12-28-mar	7:05:08	590	-0.2	-1.7	-1.5	26	16.71
12-28-mar	8:05:08	590	3.8	1.3	-2.6	26	16.72
12-28-mar	9:05:08	590	7.1	6.5	-0.6	28	16.71
12-28-mar	10:05:08	590	8.9	9.4	0.5	28	16.71
12-28-mar	11:05:08	590	10.3	11.5	1.2	29	16.70
12-28-mar	12:05:08	590	11.9	13.4	1.5	29	16.70
12-28-mar	13:05:08	590	13.2	14.5	1.2	30	16.72
12-28-mar	14:05:08	589	14.0	15.2	1.3	30	16.71
12-28-mar	15:05:08	589	13.8	15.1	1.2	30	16.71
12-28-mar	16:05:08	589	13.3	14.0	0.8	30	16.70
12-28-mar	17:05:08	589	12.7	13.2	0.5	30	16.71
12-28-mar	18:05:08	589	11.6	11.7	0.1	30	16.71
12-28-mar	19:05:08	589	10.0	9.7	-0.2	29	16.71
12-28-mar	20:05:08	589	8.2	7.7	-0.5	29	16.69
12-28-mar	21:05:08	589	8.0	7.0	-1.0	29	16.70
12-28-mar	22:05:08	589	5.4	5.1	-0.4	29	16.71
12-28-mar	23:05:08	589	3.6	2.9	-0.7	29	16.71

Collocated Monitor 964C

PM₁₀ Sampler Summary

January 1, 2012 - March 31, 2012

Network: Alton Coal Development, LLC

Site: Coal Hollow Mine

Sampler ID: 964C

AQS ID:

Sampler Type: BGI FRM Single

Date	ID	Filter	Concentration (µg/m ³)	Concentration (µg/m ³)	Sample Period (hr:min)	Sample Volume (m ³)	Std Volume (m ³)	Tare	Gross	Net	Flag	Comments
01/04/12	P0309507		22.6	26.6	23:59	24.0	20.4	146.231	146.773	0.542		
01/10/12	P0331196		11.6	13.7	23:59	24.0	20.3	140.417	140.695	0.278		
01/16/12	P0331199		27.4	32.3	23:59	24.0	20.4	139.678	140.336	0.658		
01/22/12	P0331205		1.4	1.6	23:59	24.0	20.7	140.199	140.232	0.033		
01/28/12	P0331202		4.0	4.7	23:59	24.0	20.7	140.613	140.710	0.097		
02/03/12	P0331725		5.0	5.9	23:59	24.0	20.5	139.321	139.442	0.121		
02/09/12	P0331729		6.1	7.2	23:59	24.0	20.3	139.499	139.645	0.146		
02/15/12	P0332976		5.0	5.8	23:59	24.0	20.5	142.767	142.886	0.119		
02/21/12	P0332979		5.8	6.8	23:59	24.0	20.5	139.069	139.209	0.140		
02/27/12	P0333146		52.7	63.4	23:59	24.0	20.0	144.643	145.909	1.266		
03/04/12	P0333149		5.0	5.9	23:59	24.0	20.2	139.261	139.381	0.120		
03/10/12	W0382901		7.2	8.7	23:59	24.0	20.1	143.379	143.553	0.174		
03/16/12	W0383636		15.5	18.8	23:59	24.0	19.8	141.872	142.244	0.372		
03/22/12	W0383639		15.2	18.4	23:59	24.0	19.8	143.547	143.913	0.366		
03/28/12	W0384251		64.8	78.5	23:59	24.0	19.8	141.471	143.029	1.558		
01/05/12	P0309508			Field Blank				147.611	147.619	0.008		
02/11/12	P0331731			Field Blank				140.157	140.159	0.002		
02/24/12	P0332981			Field Blank				142.181	142.196	0.015		
03/23/12	W0383640			Field Blank				142.362	142.361	-0.001		

# Valid 15	Recovery 100%	Average 19.9	St. Dev. 22.6	Max 78.5	Min 1.6
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BGI PQ200 Air Sampling System

Downloaded 2012 05 jan 13:28:14

Job Details:		Job Code: Site Name: 964C Station Code: Operators: KN User1: User2:	
Job Name: 12Jan05C.JOB Version: 5.62 Serial No: 964 Pump Time: 4582:41 Flags:			
BP TA Q	Max 601 Min 597 Avg 599 Units mmHg °C Lpm	Timer Information: Date dd-mmm Time hh:mm:ss Start: 12-04-jan 0:00:08 Stop: 12-05-jan 0:00:05 ET: 23:59	Mass Concentration Data: Filter ID: 9 Final Wt: mg Initial Wt: mg Delta Wt: 0.000 mg Total Vol: 24.038 m^3 Mass Conc: 0 µg/m3
QCV 0.55 % Max overheat 2.2 °C occured 04-jan 11:29:48			
Notes 1: Notes 2:			
<p>Temps, °C</p> <p>Legend: TA (solid line), TF (dotted line)</p> <p>Elapsed Time, Hrs</p>			
<p>Overheat, TF - TA, °C</p> <p>Elapsed Time, Hrs</p>			
<p>SP, cmH2O</p> <p>Elapsed Time, Hrs</p>			

Hourly

12-04-jan	0:05:08	599	0.3	-2.8	-3.1	21	16.72
12-04-jan	1:05:08	599	2.5	-1.1	-3.5	21	16.72
12-04-jan	2:05:08	599	3.6	1.2	-2.4	22	16.70
12-04-jan	3:05:08	599	0.1	-1.1	-1.2	22	16.71
12-04-jan	4:05:08	599	0.6	-1.7	-2.3	22	16.71
12-04-jan	5:05:08	599	0.5	-1.9	-2.4	22	16.71
12-04-jan	6:05:08	599	-1.1	-2.9	-1.8	21	16.72
12-04-jan	7:05:08	599	-1.0	-3.3	-2.3	21	16.72
12-04-jan	8:05:08	600	2.5	-0.2	-2.7	22	16.72
12-04-jan	9:05:08	600	6.9	5.5	-1.4	23	16.71
12-04-jan	10:05:08	600	11.0	11.0	0.0	24	16.71
12-04-jan	11:05:08	600	12.2	13.7	1.5	25	16.71
12-04-jan	12:05:08	599	12.1	13.4	1.3	25	16.73
12-04-jan	13:05:08	599	12.7	13.9	1.2	25	16.73
12-04-jan	14:05:08	599	13.3	14.5	1.2	25	16.71
12-04-jan	15:05:08	599	12.8	14.1	1.2	25	16.70
12-04-jan	16:05:08	599	11.6	12.5	0.9	24	16.72
12-04-jan	17:05:08	599	5.5	6.6	1.1	24	16.71
12-04-jan	18:05:08	599	1.5	1.1	-0.4	23	16.72
12-04-jan	19:05:08	599	-0.1	-1.2	-1.1	23	16.72
12-04-jan	20:05:08	599	-0.5	-2.3	-1.8	22	16.71
12-04-jan	21:05:08	599	-0.7	-2.6	-1.9	23	16.71
12-04-jan	22:05:08	599	-1.2	-3.1	-1.9	22	16.71
12-04-jan	23:05:08	599	-2.1	-3.8	-1.7	22	16.71

BGI PQ200 Air Sampling System

Downloaded 2012 13 jan 14:09:25

Job Details:

Job Name: 12Jan13C.JOB
 Version: 5.62
 Serial No: 964
 Pump Time: 4606:40
 Flags:

Job Code:
 Site Name: 964C
 Station Code:
 Operators: KN
 User1:
 User2:

	Max	Min	Avg	Units
BP	594	590	591	mmHg
TA	12.1	-6.5	0.9	°C
Q	---	---	16.71	Lpm

QCV 0.57 %
 Max overheat 2.6 °C
 occurred 10-jan 13:32:52

Timer Information:

Date dd-mmm	Time hh:mm:ss
Start: 12-10-jan	0:00:08
Stop: 12-11-jan	0:00:05

ET: 23:59

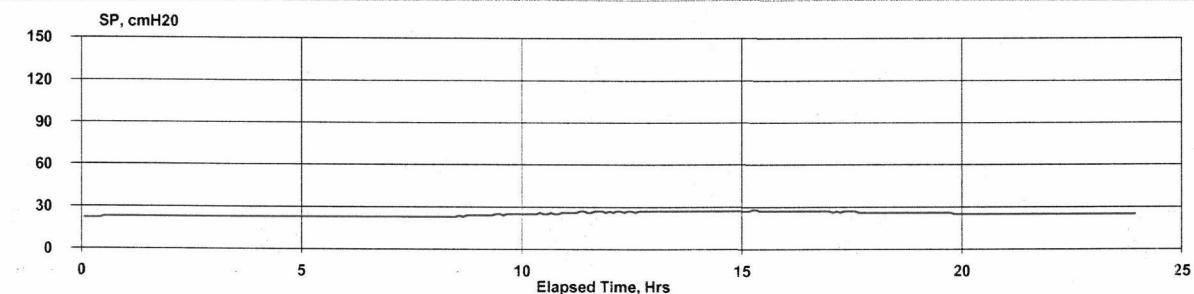
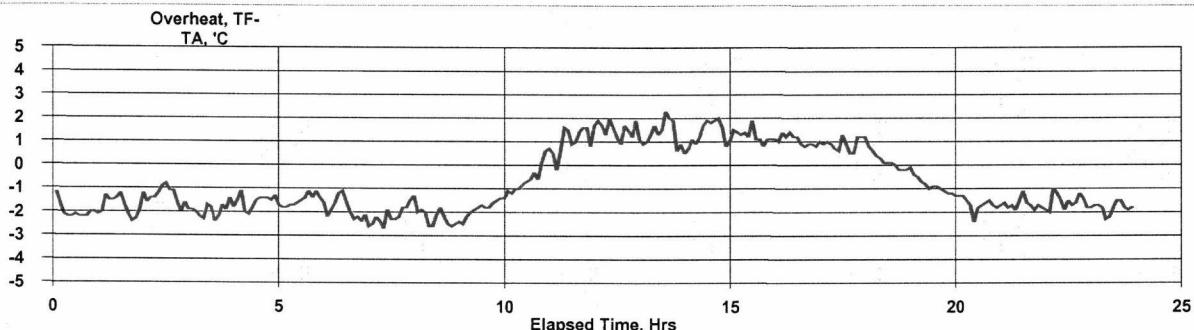
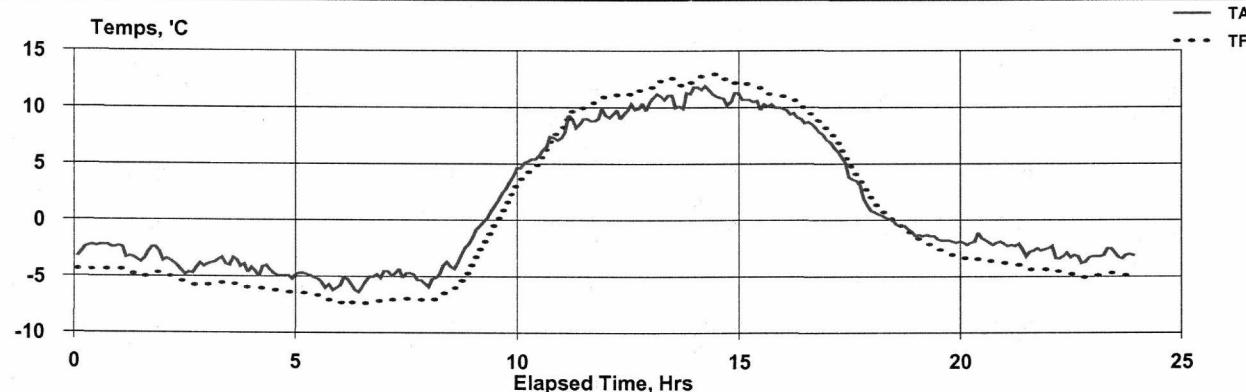
Mass Concentration Data:

Filter ID:	20
Final Wt:	mg
Initial Wt:	mg
Delta Wt:	0.000 mg
Total Vol:	24.041 m^3

Mass Conc: 0 µg/m³

Notes 1:

Notes 2:



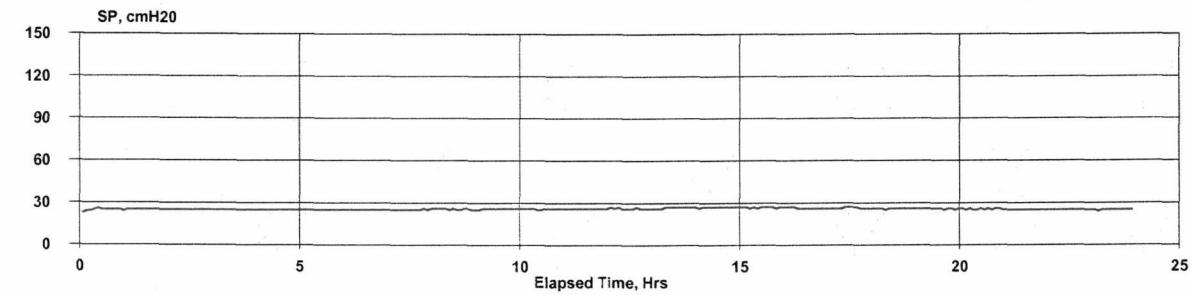
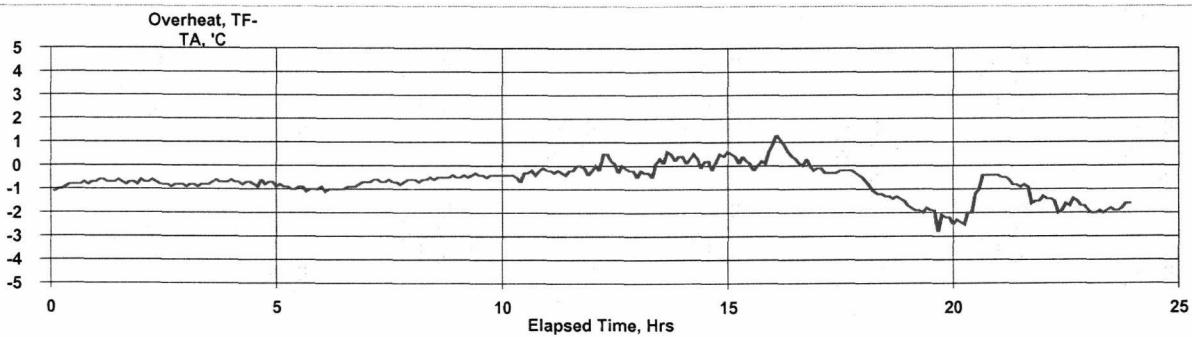
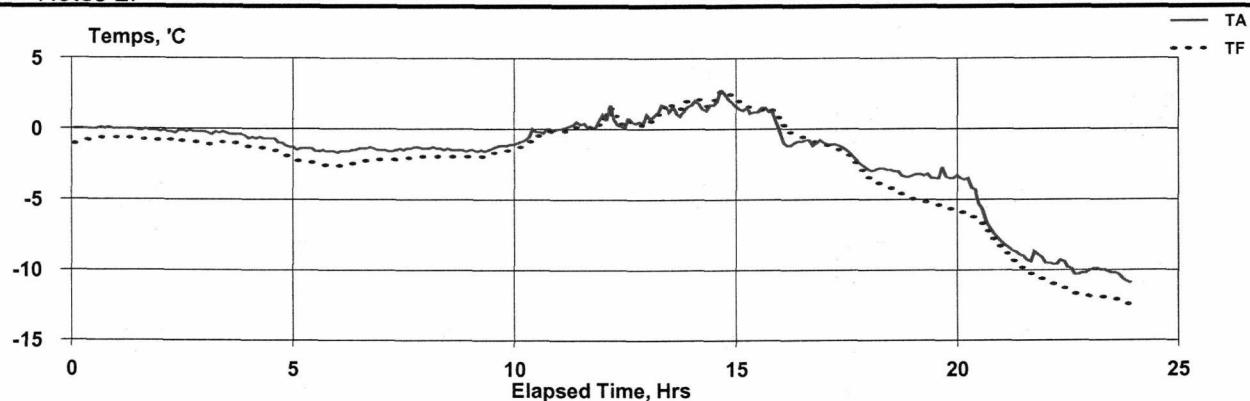
Hourly

12-10-jan	0:05:08	594	-2.4	-4.4	-2.0	23	16.72
12-10-jan	1:05:08	594	-3.1	-4.8	-1.7	23	16.71
12-10-jan	2:05:08	594	-4.1	-5.5	-1.4	23	16.71
12-10-jan	3:05:08	594	-3.8	-5.8	-1.9	23	16.72
12-10-jan	4:05:08	593	-4.7	-6.3	-1.6	23	16.72
12-10-jan	5:05:08	593	-5.4	-6.9	-1.5	23	16.71
12-10-jan	6:05:08	593	-5.4	-7.3	-1.9	23	16.72
12-10-jan	7:05:08	593	-5.0	-7.1	-2.1	23	16.72
12-10-jan	8:05:08	593	-3.7	-5.9	-2.3	23	16.73
12-10-jan	9:05:08	593	1.7	-0.2	-1.8	25	16.71
12-10-jan	10:05:08	593	6.1	5.6	-0.5	25	16.71
12-10-jan	11:05:08	592	8.9	10.0	1.1	27	16.72
12-10-jan	12:05:08	591	9.8	11.3	1.5	27	16.71
12-10-jan	13:05:08	591	10.9	12.2	1.3	27	16.71
12-10-jan	14:05:08	591	11.2	12.6	1.4	27	16.71
12-10-jan	15:05:08	591	10.3	11.6	1.3	27	16.71
12-10-jan	16:05:08	591	8.6	9.7	1.1	27	16.71
12-10-jan	17:05:08	590	4.0	4.9	0.9	26	16.72
12-10-jan	18:05:08	590	-0.2	-0.1	0.1	26	16.71
12-10-jan	19:05:08	590	-1.6	-2.6	-0.9	26	16.71
12-10-jan	20:05:08	590	-1.9	-3.6	-1.7	25	16.72
12-10-jan	21:05:08	590	-2.5	-4.2	-1.7	25	16.71
12-10-jan	22:05:08	590	-3.2	-4.8	-1.6	25	16.71
12-10-jan	23:05:08	590	-3.0	-4.8	-1.8	25	16.71

BGI PQ200 Air Sampling System

Downloaded 2012 18 jan 14:11:25

Job Details:				Job Code:				
Job Name: 12Jan18C.JOB				Site Name: 964C				
Version: 5.62				Station Code:				
Serial No: 964				Operators: KN				
Pump Time: 4630:39				User1:				
Flags:				User2:				
BP	Max 590	Min 584	Avg 586	mmHg	Timer Information:		Mass Concentration Data:	
TA	2.9	-11.1	-1.9	°C	Date dd-mmm	Time hh:mm:ss	Filter ID: 23	mg
Q	---	---	16.71	Lpm	Start: 12-16-jan	0:00:08	Initial Wt:	mg
QCV	0.58 %			Stop: 12-17-jan	0:00:05	Delta Wt: 0.000	mg	
Max overheat 2.2 °C occured 17-jan 17:42:20				ET: 23:59		Total Vol: 24.043	m³	
						Mass Conc: 0	µg/m³	
Notes 1:								
Notes 2:								



Hourly

12-16-jan	0:05:08	586	0.0	-0.8	-0.8	25	16.70
12-16-jan	1:05:08	586	-0.1	-0.7	-0.7	25	16.72
12-16-jan	2:05:08	585	-0.2	-1.0	-0.8	25	16.71
12-16-jan	3:05:08	585	-0.4	-1.1	-0.7	25	16.72
12-16-jan	4:05:08	585	-0.9	-1.6	-0.8	25	16.71
12-16-jan	5:05:08	585	-1.5	-2.5	-1.0	25	16.72
12-16-jan	6:05:08	585	-1.5	-2.4	-0.9	25	16.71
12-16-jan	7:05:08	585	-1.4	-2.1	-0.7	25	16.72
12-16-jan	8:05:08	585	-1.5	-2.0	-0.5	26	16.71
12-16-jan	9:05:08	585	-1.4	-1.8	-0.4	26	16.70
12-16-jan	10:05:08	585	-0.3	-0.7	-0.3	26	16.71
12-16-jan	11:05:08	585	0.3	0.1	-0.2	26	16.71
12-16-jan	12:05:08	585	0.6	0.6	0.0	26	16.71
12-16-jan	13:05:08	585	1.3	1.4	0.1	27	16.71
12-16-jan	14:05:08	585	1.9	2.2	0.3	27	16.71
12-16-jan	15:05:08	585	1.1	1.4	0.3	27	16.71
12-16-jan	16:05:08	586	-1.0	-0.6	0.4	26	16.70
12-16-jan	17:05:08	587	-1.8	-2.1	-0.3	26	16.69
12-16-jan	18:05:08	587	-3.1	-4.3	-1.3	26	16.72
12-16-jan	19:05:08	588	-3.3	-5.4	-2.1	26	16.72
12-16-jan	20:05:08	588	-5.6	-6.9	-1.3	26	16.72
12-16-jan	21:05:08	589	-8.9	-9.9	-1.0	25	16.71
12-16-jan	22:05:08	589	-9.8	-11.5	-1.6	25	16.71
12-16-jan	23:05:08	589	-10.3	-12.1	-1.9	25	16.72

BGI PQ200 Air Sampling System

Downloaded 2012 23 jan 10:34:26

Job Details:

Job Name: 12Jan23C.JOB
 Version: 5.62
 Serial No: 964
 Pump Time: 4654:38
 Flags:

Job Code:
 Site Name: 964C
 Station Code:
 Operators: KN
 User1:
 User2:

	Max	Min	Avg	Units
BP	590	582	588	mmHg
TA	0	-10.4	-5.1	°C
Q	---	---	16.71	Lpm

QCV 0.6 %

Max overheat 5.1 °C
 occurred 22-jan 12:43:33

Timer Information:

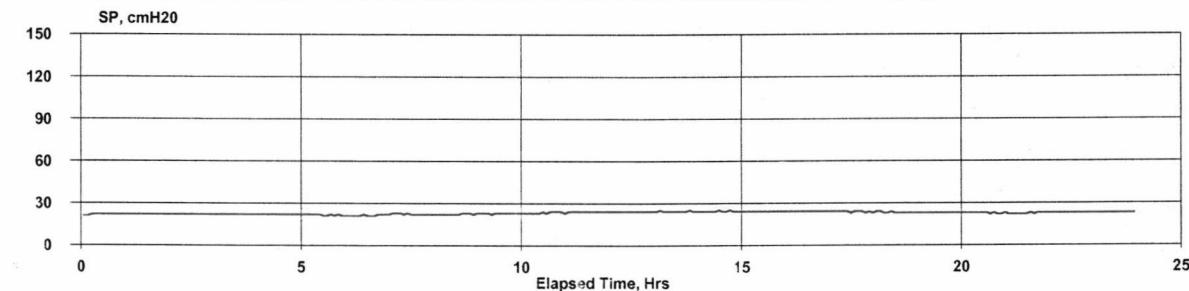
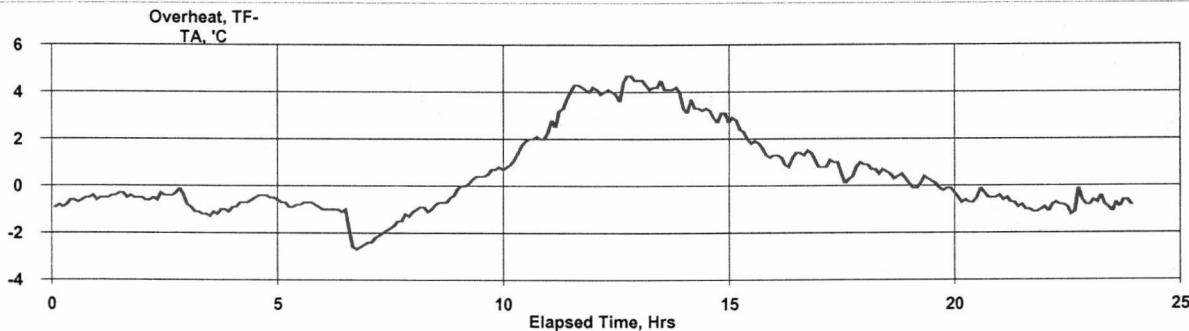
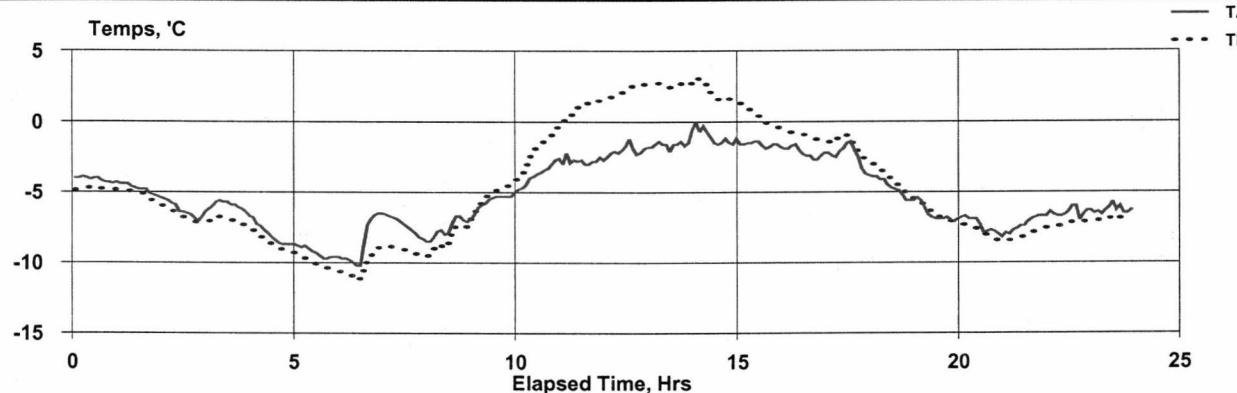
Date Time
 dd-mmm hh:mm:ss
 Start: 12-22-jan 0:00:08
 Stop: 12-23-jan 0:00:05
 ET: 23:59

Mass Concentration Data:

Filter ID: 29
 Final Wt: mg
 Initial Wt: mg
 Delta Wt: 0.000 mg
 Total Vol: 24.042 m^3

Mass Conc: 0 µg/m3

Notes 1:
 Notes 2:



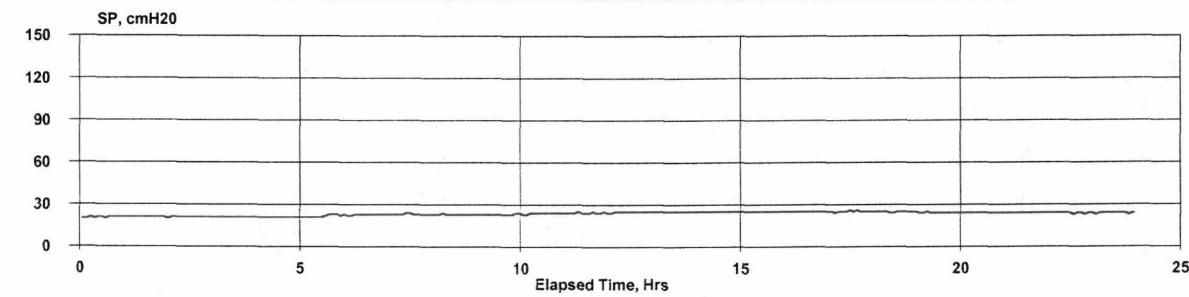
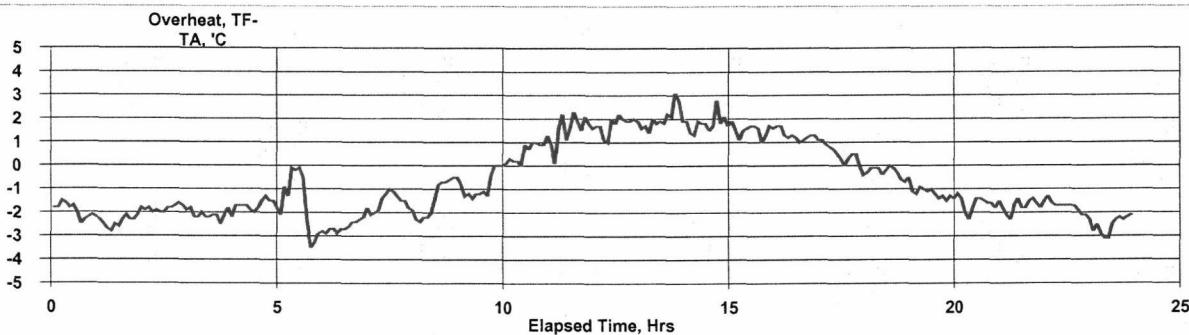
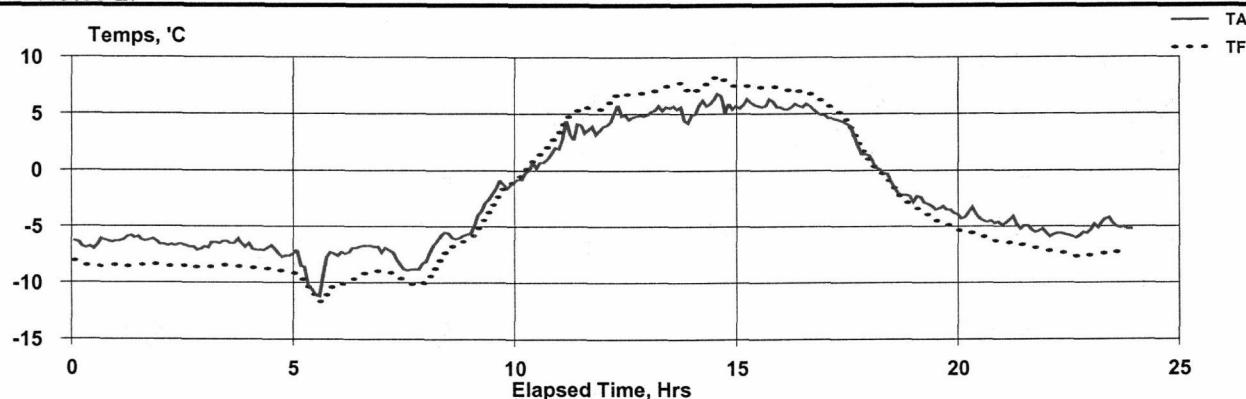
Hourly

12-22-jan	0:05:08	585	-4.1	-4.8	-0.7	22	16.72
12-22-jan	1:05:08	585	-4.8	-5.3	-0.4	22	16.71
12-22-jan	2:05:08	586	-6.3	-6.8	-0.4	22	16.71
12-22-jan	3:05:08	586	-6.0	-7.1	-1.1	22	16.69
12-22-jan	4:05:08	587	-8.1	-8.7	-0.6	22	16.69
12-22-jan	5:05:08	587	-9.3	-10.1	-0.8	22	16.71
12-22-jan	6:05:08	587	-8.5	-10.2	-1.7	21	16.72
12-22-jan	7:05:08	588	-7.5	-9.2	-1.7	22	16.70
12-22-jan	8:05:08	588	-7.5	-8.2	-0.7	22	16.72
12-22-jan	9:05:08	589	-5.6	-5.2	0.4	23	16.72
12-22-jan	10:05:08	589	-3.7	-2.0	1.7	23	16.70
12-22-jan	11:05:08	590	-2.8	1.0	3.7	24	16.71
12-22-jan	12:05:08	589	-2.0	2.2	4.2	24	16.71
12-22-jan	13:05:08	589	-1.5	2.6	4.1	24	16.71
12-22-jan	14:05:08	589	-1.1	2.1	3.1	24	16.71
12-22-jan	15:05:08	590	-1.6	0.3	1.9	24	16.71
12-22-jan	16:05:08	590	-2.2	-1.0	1.2	24	16.72
12-22-jan	17:05:08	590	-2.4	-1.7	0.7	24	16.71
12-22-jan	18:05:08	590	-4.7	-4.2	0.5	23	16.71
12-22-jan	19:05:08	590	-6.6	-6.6	0.0	23	16.71
12-22-jan	20:05:08	590	-7.4	-7.9	-0.5	23	16.71
12-22-jan	21:05:08	590	-7.2	-8.1	-0.9	22	16.72
12-22-jan	22:05:08	590	-6.5	-7.3	-0.8	23	16.72
12-22-jan	23:05:08	590	-6.3	-7.0	-0.7	23	16.71

BGI PQ200 Air Sampling System

Downloaded 2012 30 jan 10:10:03

Job Details:				Job Code:				
Job Name: 12Jan30C.JOB				Site Name: 964C				
Version: 5.62				Station Code:				
Serial No: 964				Operators: KN				
Pump Time: 4678:37				User1:				
Flags:				User2:				
BP	Max 598	Min 594	Avg 596	mmHg	Timer Information:		Mass Concentration Data:	
TA	7.1	-11.3	-2.2	°C	Date dd-mmm	Time hh:mm:ss	Filter ID: 26	mg
Q	---	---	16.71	Lpm	Start: 12-28-jan	0:00:08	Initial Wt:	mg
QCV 0.53 %				Stop: 12-29-jan	0:00:04	Delta Wt: 0.000	mg	
Max overheat 3.2 °C occured 28-jan 13:49:51				ET: 23:59		Total Vol: 24.036	m^3	
						Mass Conc: 0	µg/m3	
Notes 1:								
Notes 2:								



Hourly

12-28-jan	0:05:08	596	-6.5	-8.5	-2.0	21	16.69
12-28-jan	1:05:08	596	-6.2	-8.5	-2.4	21	16.71
12-28-jan	2:05:08	595	-6.8	-8.6	-1.8	21	16.72
12-28-jan	3:05:08	596	-6.5	-8.6	-2.1	21	16.73
12-28-jan	4:05:08	595	-7.2	-8.9	-1.7	21	16.71
12-28-jan	5:05:08	596	-8.9	-10.6	-1.7	22	16.70
12-28-jan	6:05:08	596	-7.0	-9.5	-2.5	23	16.71
12-28-jan	7:05:08	596	-8.2	-9.7	-1.6	23	16.71
12-28-jan	8:05:08	597	-6.0	-7.4	-1.4	23	16.71
12-28-jan	9:05:08	597	-2.3	-3.2	-0.8	23	16.71
12-28-jan	10:05:08	598	0.6	1.2	0.6	24	16.71
12-28-jan	11:05:08	598	3.6	5.1	1.6	24	16.72
12-28-jan	12:05:08	597	4.8	6.6	1.8	25	16.73
12-28-jan	13:05:08	597	5.2	7.3	2.0	25	16.71
12-28-jan	14:05:08	597	5.9	7.7	1.8	25	16.73
12-28-jan	15:05:08	597	5.8	7.4	1.5	25	16.71
12-28-jan	16:05:08	597	5.5	6.7	1.3	25	16.71
12-28-jan	17:05:08	597	3.3	3.7	0.4	25	16.71
12-28-jan	18:05:08	597	-1.1	-1.4	-0.3	25	16.71
12-28-jan	19:05:08	597	-3.2	-4.4	-1.2	24	16.70
12-28-jan	20:05:08	597	-4.3	-5.9	-1.6	24	16.71
12-28-jan	21:05:08	598	-5.0	-6.7	-1.7	24	16.72
12-28-jan	22:05:08	598	-5.7	-7.5	-1.8	24	16.71
12-28-jan	23:05:08	598	-4.8	-7.4	-2.5	24	16.71

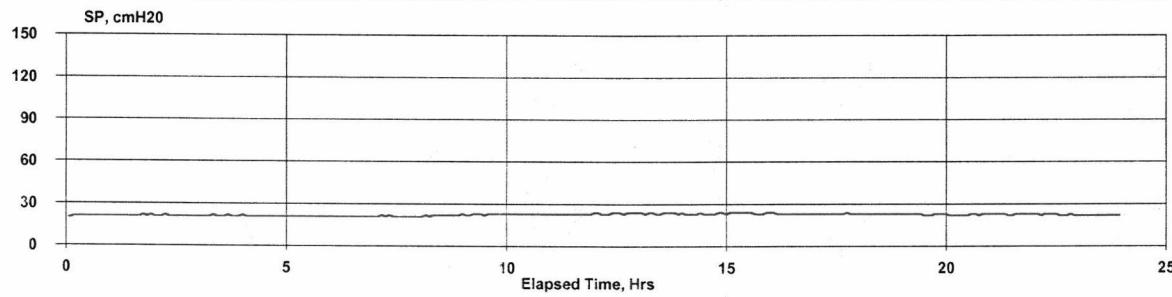
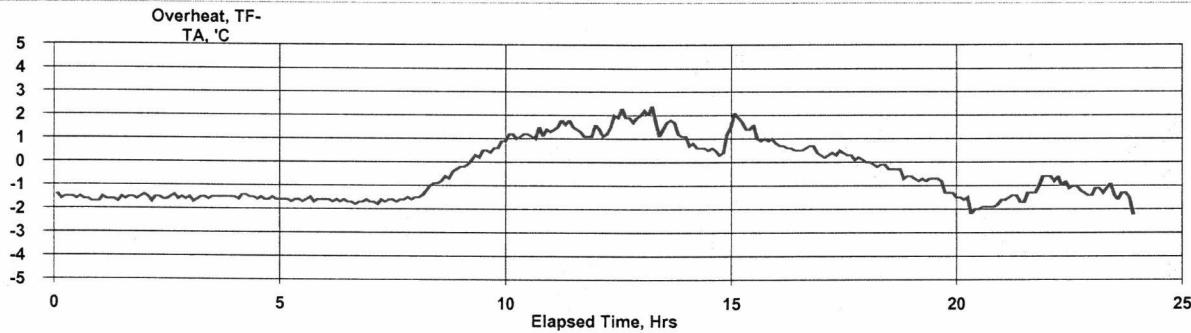
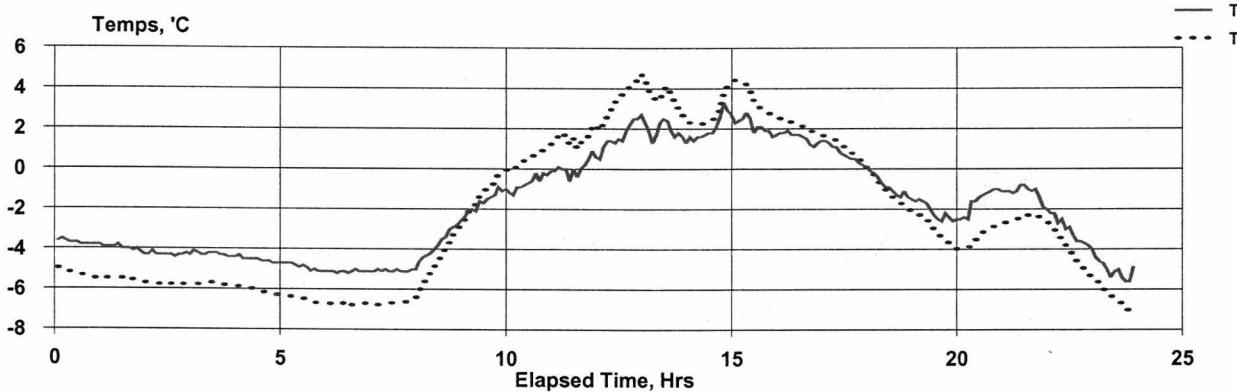
BGI PQ200 Air Sampling System

Downloaded 2012 06 feb 12:39:37

Job Details:				Job Code:		
Job Name: 12Feb06C.JOB				Site Name: 964C		
Version: 5.62				Station Code:		
Serial No: 964				Operators: KN		
Pump Time: 4702:36				User1:		
Flags:				User2:		
BP	Max 592	Min 586	Avg 589	mmHg	Timer Information:	Mass Concentration Data:
TA	3.5	-5.8	-1.8	°C	Date dd-mmm	Date dd-mmm
Q	---	---	16.71	Lpm	Start: 12-03-feb	Time hh:mm:ss
QCV	0.58 %			Stop: 12-04-feb	0:00:05	Filter ID: 5 mg
Max overheat 2.6 °C occured 03-feb 13:14:47				ET: 23:59	Initial Wt: 0.000 mg	
					Delta Wt: 0.000 mg	
					Total Vol: 24.042 m³	
					Mass Conc: 0 µg/m³	

Notes 1:

Notes 2:



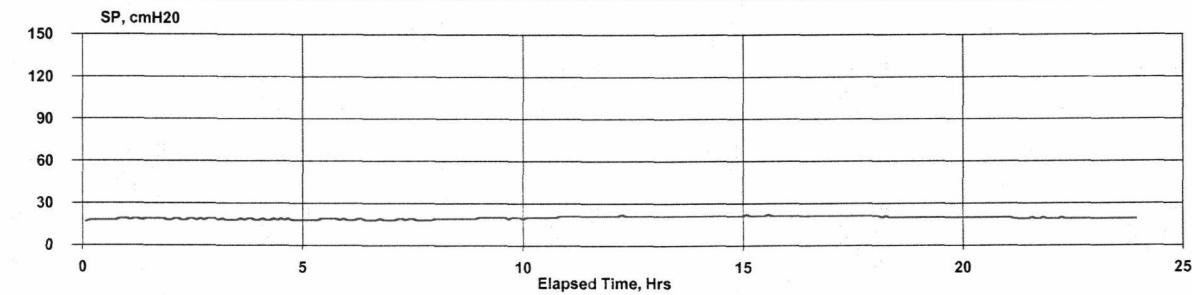
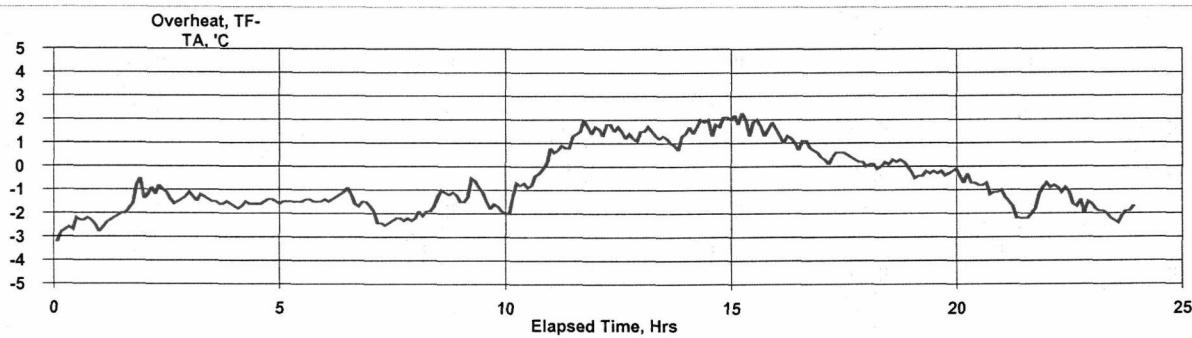
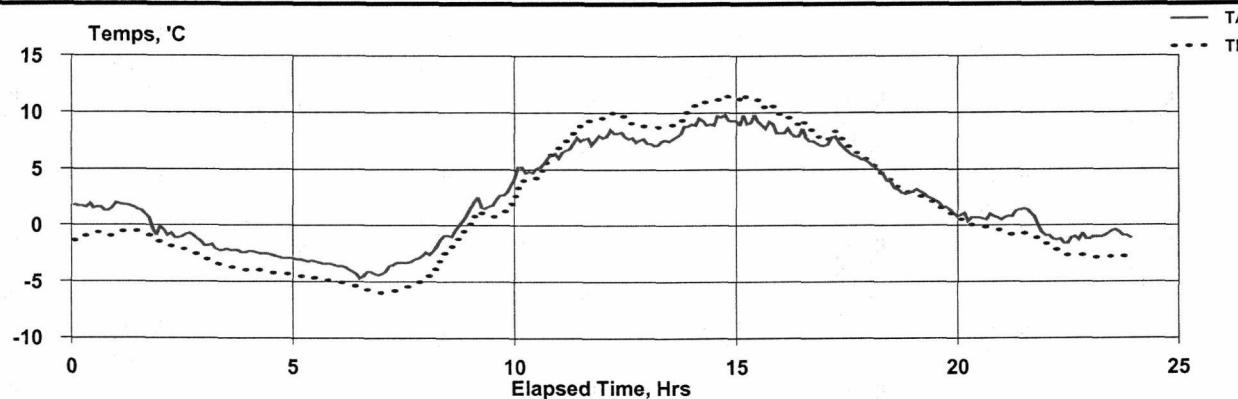
Hourly

12-03-feb	0:05:08	588	-3.7	-5.3	-1.6	21	16.72
12-03-feb	1:05:08	589	-4.0	-5.6	-1.6	21	16.72
12-03-feb	2:05:08	588	-4.3	-5.8	-1.5	21	16.72
12-03-feb	3:05:08	588	-4.3	-5.8	-1.5	21	16.72
12-03-feb	4:05:08	589	-4.6	-6.1	-1.5	21	16.72
12-03-feb	5:05:08	589	-4.9	-6.5	-1.6	21	16.72
12-03-feb	6:05:08	589	-5.1	-6.8	-1.7	21	16.73
12-03-feb	7:05:08	590	-5.1	-6.7	-1.6	21	16.71
12-03-feb	8:05:08	590	-3.6	-4.4	-0.8	22	16.72
12-03-feb	9:05:08	590	-1.6	-1.2	0.4	23	16.71
12-03-feb	10:05:08	590	-0.7	0.5	1.2	23	16.72
12-03-feb	11:05:08	590	0.1	1.5	1.4	23	16.72
12-03-feb	12:05:08	590	1.7	3.4	1.7	24	16.71
12-03-feb	13:05:08	590	1.9	3.5	1.6	24	16.71
12-03-feb	14:05:08	590	2.1	2.8	0.7	23	16.71
12-03-feb	15:05:08	590	2.1	3.4	1.3	24	16.70
12-03-feb	16:05:08	590	1.6	2.1	0.6	23	16.70
12-03-feb	17:05:08	591	0.7	1.0	0.3	23	16.72
12-03-feb	18:05:08	591	-0.9	-1.2	-0.3	23	16.72
12-03-feb	19:05:08	591	-2.1	-3.1	-0.9	23	16.71
12-03-feb	20:05:08	591	-1.6	-3.4	-1.8	22	16.71
12-03-feb	21:05:08	592	-1.2	-2.5	-1.3	23	16.74
12-03-feb	22:05:08	592	-3.1	-4.1	-1.0	23	16.72
12-03-feb	23:05:08	592	-5.1	-6.4	-1.3	22	16.72

BGI PQ200 Air Sampling System

Downloaded 2012 11 feb 09:28:53

Job Details:				Job Code:				
Job Name: 12Feb11C.JOB				Site Name: 964C				
Version: 5.62				Station Code:				
Serial No: 964				Operators: KN				
Pump Time: 4726:35				User1:				
Flags:				User2:				
BP	Max 595	Min 592	Avg 594	mmHg	Timer Information:		Mass Concentration Data:	
TA	10	-4.7	2.3	°C	Date dd-mmm	Time hh:mm:ss	Filter ID: 9	Final Wt: mg
Q	---	---	16.71	Lpm	Start: 12-09-feb	0:00:08	Initial Wt: mg	Delta Wt: 0.000 mg
QCV	0.48 %			Stop: 12-10-feb	0:00:05	Total Vol: 24.037 m^3	Mass Conc: 0 µg/m³	
Max overheat 2.5 °C occured 09-feb 14:55:23				ET: 23:59				
Notes 1: Notes 2:								



Hourly

12-09-feb	0:05:08	594	1.6	-0.9	-2.5	18	16.71
12-09-feb	1:05:08	594	1.0	-0.8	-1.8	19	16.70
12-09-feb	2:05:08	594	-1.0	-2.2	-1.2	19	16.72
12-09-feb	3:05:08	594	-2.2	-3.6	-1.5	18	16.72
12-09-feb	4:05:08	594	-2.7	-4.2	-1.6	18	16.72
12-09-feb	5:05:08	594	-3.3	-4.7	-1.5	19	16.72
12-09-feb	6:05:08	594	-4.2	-5.6	-1.4	18	16.72
12-09-feb	7:05:08	594	-3.2	-5.5	-2.3	18	16.72
12-09-feb	8:05:08	594	-0.7	-2.2	-1.5	19	16.71
12-09-feb	9:05:08	595	2.5	1.1	-1.4	20	16.70
12-09-feb	10:05:08	595	5.4	4.8	-0.6	20	16.72
12-09-feb	11:05:08	595	7.4	8.6	1.2	21	16.73
12-09-feb	12:05:08	594	7.9	9.3	1.5	21	16.72
12-09-feb	13:05:08	594	7.9	9.1	1.3	21	16.72
12-09-feb	14:05:08	594	9.3	11.1	1.8	21	16.70
12-09-feb	15:05:08	594	9.0	10.8	1.8	21	16.70
12-09-feb	16:05:08	594	7.8	8.7	0.9	21	16.72
12-09-feb	17:05:08	594	6.7	7.0	0.4	21	16.72
12-09-feb	18:05:08	594	3.8	3.9	0.1	20	16.71
12-09-feb	19:05:08	594	2.1	1.8	-0.3	20	16.71
12-09-feb	20:05:08	594	0.7	-0.1	-0.8	20	16.71
12-09-feb	21:05:08	595	0.7	-1.0	-1.7	19	16.71
12-09-feb	22:05:08	594	-1.2	-2.5	-1.3	19	16.70
12-09-feb	23:05:08	594	-0.8	-2.8	-2.0	19	16.71

BGI PQ200 Air Sampling System

Downloaded 2012 17 feb 10:44:41

Job Details:				Job Code: Site Name: 964C Station Code: Operators: KN User1: User2:	
Job Name: 12Feb17C.JOB Version: 5.62 Serial No: 964 Pump Time: 4750:34 Flags:					
BP	Max 589	Min 584	Avg 586	Units mmHg	
TA	-1.6	-11.2	-4.1	°C	
Q	---	---	16.71	Lpm	
QCV 0.53 %				Timer Information:	
				Date dd-mmm Start: 12-15-feb	Time hh:mm:ss 0:00:08
				Stop: 12-16-feb	0:00:04
Max overheat 2.4 °C occured 16-feb 15:29:35				ET: 23:59	Mass Conc: 0 µg/m³
Notes 1: Notes 2:					
<p>Temps, °C</p> <p>Legend: TA (solid line), TF (dotted line)</p> <p>Y-axis: -12 to 0</p> <p>X-axis: Elapsed Time, Hrs (0 to 25)</p>					
<p>Overheat, TF - TA, °C</p> <p>Y-axis: -5 to 5</p> <p>X-axis: Elapsed Time, Hrs (0 to 25)</p>					
<p>SP, cmH2O</p> <p>Y-axis: 0 to 150</p> <p>X-axis: Elapsed Time, Hrs (0 to 25)</p>					

Hourly

12-15-feb	0:05:08	586	-6.5	-7.7	-1.2	20	16.71
12-15-feb	1:05:08	586	-8.3	-8.6	-0.2	20	16.71
12-15-feb	2:05:08	586	-10.3	-10.9	-0.6	20	16.72
12-15-feb	3:05:08	586	-7.8	-9.2	-1.4	20	16.71
12-15-feb	4:05:08	585	-7.2	-8.0	-0.8	21	16.71
12-15-feb	5:05:08	585	-5.2	-6.4	-1.2	21	16.70
12-15-feb	6:05:08	586	-3.8	-4.7	-0.9	21	16.71
12-15-feb	7:05:08	586	-3.7	-4.3	-0.6	21	16.72
12-15-feb	8:05:08	586	-3.6	-4.1	-0.5	21	16.72
12-15-feb	9:05:08	586	-3.3	-3.6	-0.3	22	16.71
12-15-feb	10:05:08	586	-2.6	-2.7	-0.1	22	16.71
12-15-feb	11:05:08	586	-2.3	-2.0	0.3	22	16.72
12-15-feb	12:05:08	586	-2.3	-1.6	0.7	22	16.72
12-15-feb	13:05:08	586	-2.2	-1.4	0.7	22	16.71
12-15-feb	14:05:08	586	-2.2	-1.6	0.6	22	16.71
12-15-feb	15:05:08	586	-2.1	-1.5	0.6	22	16.70
12-15-feb	16:05:08	586	-2.1	-1.7	0.4	22	16.71
12-15-feb	17:05:08	587	-2.3	-2.6	-0.3	22	16.72
12-15-feb	18:05:08	587	-2.7	-3.3	-0.7	22	16.71
12-15-feb	19:05:08	587	-2.8	-4.0	-1.2	22	16.71
12-15-feb	20:05:08	588	-2.7	-3.7	-1.0	22	16.72
12-15-feb	21:05:08	588	-4.5	-5.4	-0.9	22	16.72
12-15-feb	22:05:08	588	-4.9	-6.3	-1.5	22	16.72
12-15-feb	23:05:08	589	-5.1	-6.4	-1.3	22	16.72

BGI PQ200 Air Sampling System

Downloaded 2012 24 feb 12:27:11

Job Details:				Job Code: Site Name: 964C Station Code: Operators: KN User1: User2:
Job Name: 12Feb24C.JOB Version: 5.62 Serial No: 964 Pump Time: 4774:33 Flags:				
BP	Max 594	Min 589	Avg 591	Units mmHg
TA	9.4	-9.9	-1	°C
Q	---	---	16.71	Lpm
QCV 0.56 %				
Max overheat 3.9 °C occured 21-feb 12:13:47				
				Timer Information: Date dd-mmm Start: 12-21-feb Stop: 12-22-feb Time hh:mm:ss ET: 23:59
				Mass Concentration Data: Filter ID: 16 Final Wt: mg Initial Wt: mg Delta Wt: 0.000 mg Total Vol: 24.041 m³ Mass Conc: 0 µg/m³
<p>Notes 1:</p> <p>Notes 2:</p> <p>The graph shows two data series: TA (Total Air) and TF (Filtered). The TA line starts at approximately -10°C and rises sharply after 10 hours to about 8°C before gradually declining. The TF line follows the TA line closely until 10 hours, then rises more sharply to about 10°C before declining.</p>				
<p>The graph shows the difference between TF and TA temperatures. It remains near zero until 10 hours, then fluctuates between 1°C and 3°C before declining.</p>				
<p>The graph shows the static pressure (SP) remaining relatively constant around 30 cmH2O throughout the entire 25-hour period.</p>				

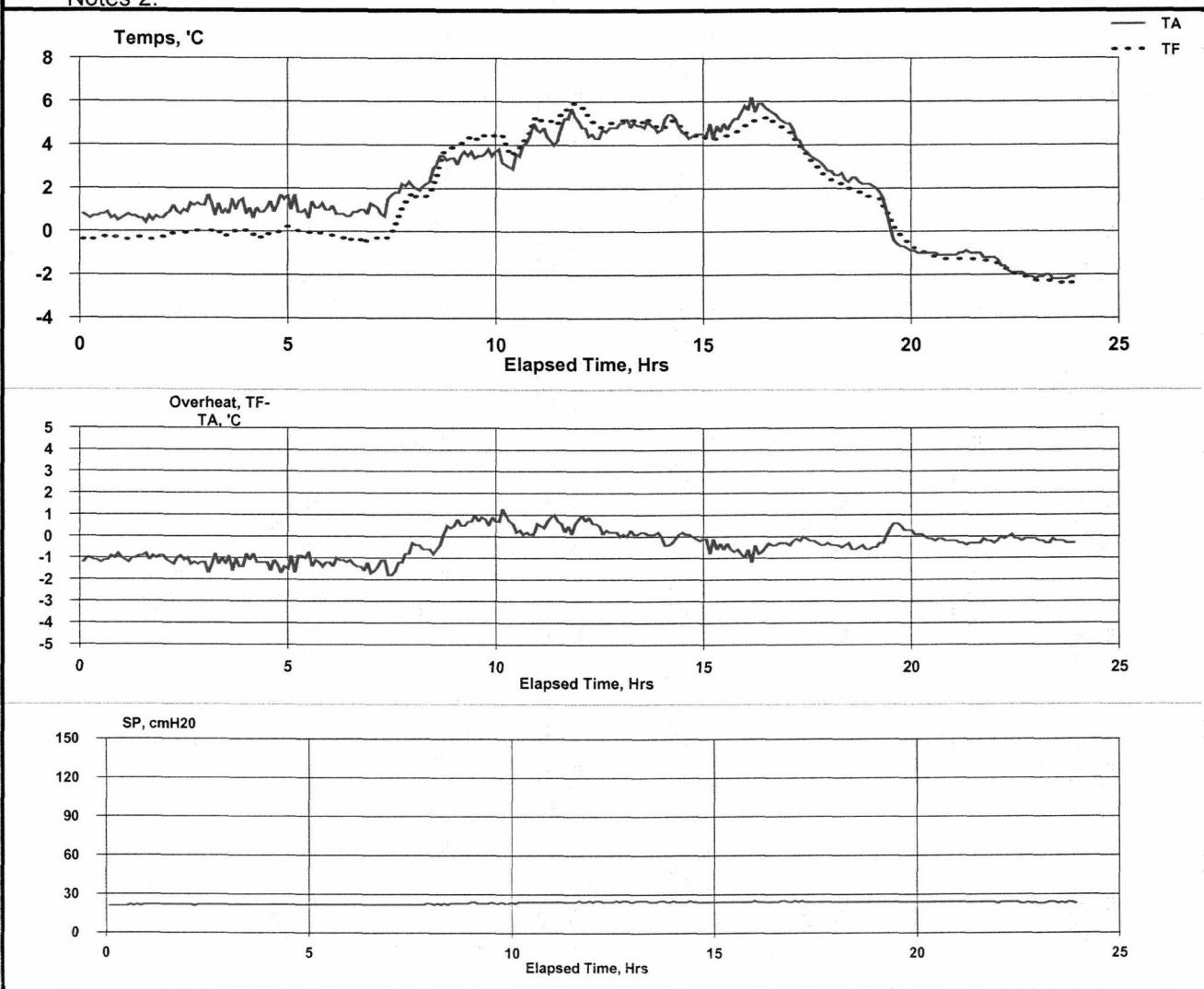
Hourly

12-21-feb	0:05:08	591	-8.4	-10.3	-1.9	21	16.71
12-21-feb	1:05:08	591	-8.7	-10.5	-1.8	22	16.72
12-21-feb	2:05:08	591	-8.7	-11.0	-2.3	22	16.72
12-21-feb	3:05:08	591	-8.6	-10.7	-2.1	22	16.72
12-21-feb	4:05:08	591	-8.2	-10.1	-1.9	22	16.71
12-21-feb	5:05:08	591	-8.3	-10.2	-1.9	22	16.70
12-21-feb	6:05:08	591	-8.6	-10.3	-1.7	22	16.73
12-21-feb	7:05:08	591	-7.6	-9.7	-2.0	22	16.71
12-21-feb	8:05:08	592	-4.0	-5.5	-1.5	23	16.72
12-21-feb	9:05:08	592	0.6	0.2	-0.4	24	16.72
12-21-feb	10:05:08	592	2.8	4.2	1.4	25	16.72
12-21-feb	11:05:08	592	5.2	7.7	2.5	26	16.71
12-21-feb	12:05:08	592	6.1	9.1	3.0	26	16.73
12-21-feb	13:05:08	592	6.7	8.9	2.3	26	16.72
12-21-feb	14:05:08	592	7.6	9.8	2.3	26	16.70
12-21-feb	15:05:08	591	6.8	8.3	1.5	26	16.71
12-21-feb	16:05:08	591	6.0	7.2	1.3	26	16.71
12-21-feb	17:05:08	592	4.2	4.4	0.2	25	16.71
12-21-feb	18:05:08	592	1.5	1.5	0.0	25	16.71
12-21-feb	19:05:08	593	-0.8	-1.5	-0.6	25	16.71
12-21-feb	20:05:08	593	-1.0	-2.3	-1.3	25	16.71
12-21-feb	21:05:08	593	-0.2	-1.2	-1.1	25	16.72
12-21-feb	22:05:08	593	0.4	-0.8	-1.2	25	16.72
12-21-feb	23:05:08	593	0.1	-1.3	-1.4	25	16.71

BGI PQ200 Air Sampling System

Downloaded 2012 28 feb 11:55:41

Job Details:				Job Code:				
Job Name: 12Feb28C.JOB				Site Name:				
Version: 5.62				Station Code:				
Serial No: 964				Operators:				
Pump Time: 4798:32				User1:				
Flags:				User2:				
BP	Max	Min	Avg	Units	Timer Information:		Mass Concentration Data:	
BP	586	581	583	mmHg	Date	Time	Filter ID:	
TA	6.4	-2.3	2.1	°C	dd-mmm	hh:mm:ss	Final Wt:	mg
Q	---	---	16.71	Lpm	Start: 12-27-feb	0:00:08	Initial Wt:	mg
QCV 0.57 %				Stop: 12-28-feb	0:00:05	Delta Wt:	0.000 mg	
Max overheat 1.4 °C occured 28-feb 11:52:57				ET: 23:59		Total Vol:	24.041 m^3	
Notes 1:				Mass Conc:	0 µg/m3			
Notes 2:								



Hourly

12-27-feb	0:05:08	586	0.7	-0.3	-1.0	21	16.71
12-27-feb	1:05:08	586	0.6	-0.3	-1.0	22	16.72
12-27-feb	2:05:08	585	1.1	-0.1	-1.2	22	16.72
12-27-feb	3:05:08	585	1.2	-0.1	-1.2	22	16.72
12-27-feb	4:05:08	585	1.2	-0.1	-1.3	22	16.71
12-27-feb	5:05:08	585	1.1	-0.1	-1.1	22	16.71
12-27-feb	6:05:08	585	0.9	-0.4	-1.3	22	16.71
12-27-feb	7:05:08	585	1.6	0.4	-1.2	22	16.71
12-27-feb	8:05:08	585	2.8	2.6	-0.2	23	16.70
12-27-feb	9:05:08	585	3.5	4.3	0.7	23	16.70
12-27-feb	10:05:08	585	3.8	4.3	0.5	24	16.72
12-27-feb	11:05:08	585	4.8	5.4	0.6	24	16.71
12-27-feb	12:05:08	584	4.7	5.1	0.4	24	16.71
12-27-feb	13:05:08	583	4.9	5.0	0.1	25	16.73
12-27-feb	14:05:08	582	4.8	4.7	-0.1	24	16.72
12-27-feb	15:05:08	582	5.0	4.4	-0.5	24	16.72
12-27-feb	16:05:08	582	5.6	5.0	-0.5	24	16.71
12-27-feb	17:05:08	582	3.7	3.5	-0.2	24	16.71
12-27-feb	18:05:08	582	2.4	2.0	-0.5	24	16.71
12-27-feb	19:05:08	582	0.4	0.5	0.1	24	16.71
12-27-feb	20:05:08	582	-1.0	-1.1	-0.1	24	16.72
12-27-feb	21:05:08	582	-1.1	-1.3	-0.3	24	16.70
12-27-feb	22:05:08	582	-1.9	-1.9	-0.1	24	16.71
12-27-feb	23:05:08	581	-2.1	-2.4	-0.2	24	16.71

BGI PQ200 Air Sampling System

Downloaded 2012 05 mar 15:14:59

Job Details:				Job Code: Site Name: 964C Station Code: Operators: KN User1: User2:	
Job Name: 12Mar05C.JOB Version: 5.62 Serial No: 964 Pump Time: 4822:31 Flags:					
BP	Max 596	Min 594	Avg 595	Units mmHg	
TA	15	-2.6	4.5	°C	
Q	---	---	16.71	Lpm	
QCV 0.55 %					
Max overheat 2.5 °C occured 04-mar 12:24:28					
				Timer Information:	
				Date dd-mmm Start: 12-04-mar Stop: 12-05-mar	Time hh:mm:ss 0:00:08 0:00:05
				ET: 23:59	
				Mass Concentration Data:	
				Filter ID: 9	
				Final Wt:	mg
				Initial Wt:	mg
				Delta Wt: 0.000	mg
				Total Vol: 24.035	m^3
				Mass Conc:	0 µg/m3
Notes 1: Notes 2:					
<p>Temps, °C</p> <p>Legend: TA (solid line), TF (dotted line)</p> <p>Y-axis: -5 to 20</p> <p>X-axis: Elapsed Time, Hrs (0 to 25)</p>					
<p>Overheat, TF - TA, °C</p> <p>Y-axis: -5 to 5</p> <p>X-axis: Elapsed Time, Hrs (0 to 25)</p>					
<p>SP, cmH2O</p> <p>Y-axis: 0 to 150</p> <p>X-axis: Elapsed Time, Hrs (0 to 25)</p>					

Hourly

12-04-mar	0:05:08	596	1.0	-1.2	-2.2	19	16.71
12-04-mar	1:05:08	596	0.4	-1.2	-1.5	19	16.72
12-04-mar	2:05:08	596	0.7	-1.4	-2.1	19	16.68
12-04-mar	3:05:08	595	0.7	-1.2	-1.9	19	16.70
12-04-mar	4:05:08	595	-0.7	-2.2	-1.5	19	16.71
12-04-mar	5:05:08	595	-0.1	-2.5	-2.3	19	16.72
12-04-mar	6:05:08	596	-0.6	-2.5	-1.9	19	16.73
12-04-mar	7:05:08	596	-1.4	-3.1	-1.6	19	16.74
12-04-mar	8:05:08	596	3.1	1.4	-1.7	19	16.72
12-04-mar	9:05:08	596	4.8	5.2	0.4	21	16.71
12-04-mar	10:05:08	596	7.1	8.0	0.9	21	16.72
12-04-mar	11:05:08	596	9.0	10.5	1.5	21	16.69
12-04-mar	12:05:08	596	10.9	12.5	1.6	21	16.71
12-04-mar	13:05:08	595	12.2	13.9	1.7	21	16.71
12-04-mar	14:05:08	595	13.0	14.7	1.7	22	16.71
12-04-mar	15:05:08	594	13.7	15.2	1.5	22	16.71
12-04-mar	16:05:08	594	13.6	15.0	1.4	22	16.71
12-04-mar	17:05:08	594	11.9	12.7	0.8	21	16.72
12-04-mar	18:05:08	594	6.7	7.4	0.7	21	16.71
12-04-mar	19:05:08	594	2.2	2.2	0.0	20	16.72
12-04-mar	20:05:08	594	0.5	-0.4	-0.9	20	16.71
12-04-mar	21:05:08	594	-0.2	-1.7	-1.5	19	16.71
12-04-mar	22:05:08	594	-1.0	-2.7	-1.7	19	16.72
12-04-mar	23:05:08	594	-1.1	-3.2	-2.0	19	16.71

BGI PQ200 Air Sampling System

Downloaded 2012 12 mar 09:31:39

Job Details:				Job Code:			
Job Name: 12Mar12C.JOB				Site Name: 964C			
Version: 5.62				Station Code:			
Serial No: 964				Operators: KN			
Pump Time: 4846:30				User1:			
Flags:				User2:			
BP	Max 593	Min 588	Avg 589	mmHg	Timer Information:	Mass Concentration Data:	
TA	12.8	-5.5	3.1	°C	Date dd-mmm Start: 12-10-mar	Time hh:mm:ss Stop: 12-11-mar 0:00:08	Filter ID: 18
Q	---	---	16.71	Lpm	ET: 23:59	Final Wt:	mg
QCV	0.57 %					Initial Wt:	mg
Max overheat 2.7 °C occured 10-mar 14:30:29						Delta Wt: 0.000	mg
						Total Vol: 24.042	m^3
Notes 1:				Mass Conc:	0	μg/m3	
Notes 2:							
<p>Temps, °C</p> <p>Legend: TA (solid line), TF (dashed line)</p> <p>Y-axis: -10 to 15</p> <p>X-axis: Elapsed Time, Hrs (0 to 25)</p>							
<p>Overheat, TF - TA, °C</p> <p>Y-axis: -5 to 5</p> <p>X-axis: Elapsed Time, Hrs (0 to 25)</p>							
<p>SP, cmH2O</p> <p>Y-axis: 0 to 150</p> <p>X-axis: Elapsed Time, Hrs (0 to 25)</p>							

Hourly

12-10-mar	0:05:08	592	-2.5	-4.6	-2.1	34	16.71
12-10-mar	1:05:08	592	-3.5	-5.4	-1.9	34	16.72
12-10-mar	2:05:08	592	-4.0	-6.1	-2.1	34	16.72
12-10-mar	3:05:08	591	-4.1	-6.3	-2.2	34	16.72
12-10-mar	4:05:08	591	-4.6	-6.5	-1.9	34	16.72
12-10-mar	5:05:08	591	-4.6	-6.7	-2.1	34	16.71
12-10-mar	6:05:08	591	-4.8	-6.9	-2.1	34	16.71
12-10-mar	7:05:08	591	-2.0	-4.5	-2.5	34	16.71
12-10-mar	8:05:08	591	3.9	2.2	-1.7	35	16.71
12-10-mar	9:05:08	591	7.6	7.9	0.3	36	16.71
12-10-mar	10:05:08	590	9.0	10.7	1.7	37	16.71
12-10-mar	11:05:08	590	9.7	11.2	1.6	38	16.71
12-10-mar	12:05:08	590	10.6	12.2	1.6	38	16.71
12-10-mar	13:05:08	589	11.1	12.7	1.6	38	16.72
12-10-mar	14:05:08	589	11.6	13.5	1.9	38	16.71
12-10-mar	15:05:08	588	11.8	13.3	1.5	38	16.71
12-10-mar	16:05:08	588	11.8	13.0	1.2	38	16.71
12-10-mar	17:05:08	588	10.7	11.6	0.9	38	16.71
12-10-mar	18:05:08	588	6.4	7.0	0.7	37	16.71
12-10-mar	19:05:08	588	2.0	1.9	0.0	37	16.72
12-10-mar	20:05:08	588	0.2	-0.5	-0.7	36	16.70
12-10-mar	21:05:08	588	-0.8	-2.1	-1.3	36	16.71
12-10-mar	22:05:08	588	-0.7	-2.5	-1.8	36	16.72
12-10-mar	23:05:08	588	-1.2	-3.0	-1.8	36	16.71

BGI PQ200 Air Sampling System

Downloaded 2012 19 mar 10:45:37

Job Details:				Job Code:				
Job Name: 12Mar19C.JOB				Site Name: 964C				
Version: 5.62				Station Code:				
Serial No: 964				Operators: KN				
Pump Time: 4870:29				User1:				
Flags:				User2:				
BP	Max 591	Min 586	Avg 588	Units mmHg	Timer Information:		Mass Concentration Data:	
TA	16.1	-0.6	7.2	°C	Date dd-mmm	Time hh:mm:ss	Filter ID: 13	mg
Q	---	---	16.71	Lpm	Start: 12-16-mar	0:00:08	Initial Wt:	mg
QCV	0.47 %				Stop: 12-17-mar	0:00:04	Delta Wt: 0.000	mg
Max overheat 2.7 °C occured 16-mar 13:30:27				ET: 23:59		Total Vol: 24.04	m^3	
					Mass Conc: 0	μg/m3		
Notes 1: Notes 2:								
<p>Temps, °C</p> <p>Legend: TA (solid line), TF (dashed line)</p> <p>Y-axis: -5 to 20</p> <p>X-axis: Elapsed Time, Hrs (0 to 25)</p>								
<p>Overheat, TF - TA, °C</p> <p>Y-axis: -5 to 5</p> <p>X-axis: Elapsed Time, Hrs (0 to 25)</p>								
<p>SP, cmH2O</p> <p>Y-axis: 0 to 150</p> <p>X-axis: Elapsed Time, Hrs (0 to 25)</p>								

Hourly

12-16-mar	0:05:08	591	2.4	0.9	-1.5	27	16.70
12-16-mar	1:05:08	591	1.7	0.4	-1.4	27	16.72
12-16-mar	2:05:08	590	1.4	-0.1	-1.5	27	16.72
12-16-mar	3:05:08	590	0.9	-0.6	-1.5	27	16.71
12-16-mar	4:05:08	590	0.5	-1.0	-1.5	27	16.71
12-16-mar	5:05:08	589	0.7	-1.0	-1.7	27	16.71
12-16-mar	6:05:08	589	0.7	-0.8	-1.6	27	16.71
12-16-mar	7:05:08	589	0.6	-1.0	-1.6	27	16.72
12-16-mar	8:05:08	589	3.7	1.6	-2.1	27	16.71
12-16-mar	9:05:08	590	8.2	7.2	-0.9	29	16.71
12-16-mar	10:05:08	590	9.5	10.1	0.6	29	16.71
12-16-mar	11:05:08	590	10.7	11.8	1.1	30	16.71
12-16-mar	12:05:08	589	12.3	13.8	1.5	30	16.71
12-16-mar	13:05:08	589	13.6	15.2	1.6	30	16.71
12-16-mar	14:05:08	588	14.1	15.5	1.5	30	16.72
12-16-mar	15:05:08	587	14.8	15.9	1.1	31	16.71
12-16-mar	16:05:08	587	14.9	15.5	0.6	30	16.71
12-16-mar	17:05:08	587	14.3	15.3	1.0	30	16.71
12-16-mar	18:05:08	587	12.6	12.6	0.0	30	16.71
12-16-mar	19:05:08	587	10.3	9.8	-0.5	30	16.72
12-16-mar	20:05:08	587	7.7	7.0	-0.7	29	16.72
12-16-mar	21:05:08	587	6.4	5.6	-0.8	29	16.71
12-16-mar	22:05:08	587	5.4	4.4	-1.0	29	16.69
12-16-mar	23:05:08	586	4.2	3.2	-1.0	29	16.71

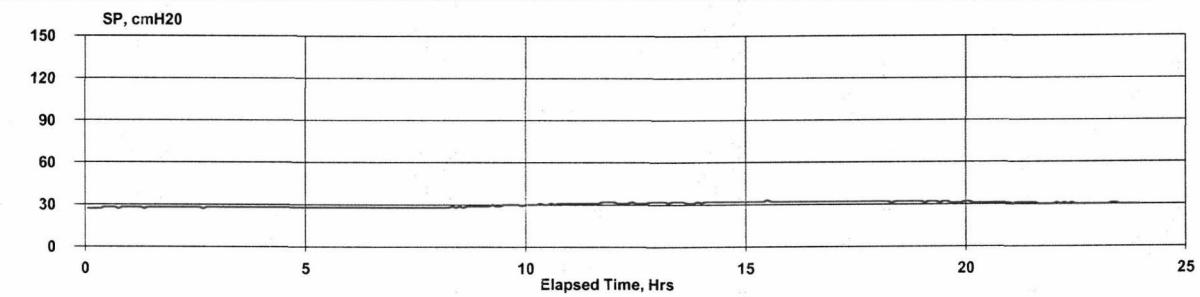
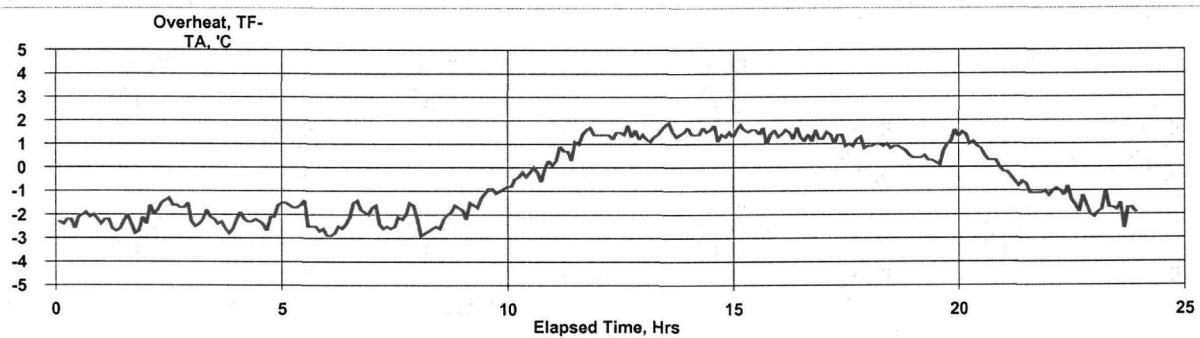
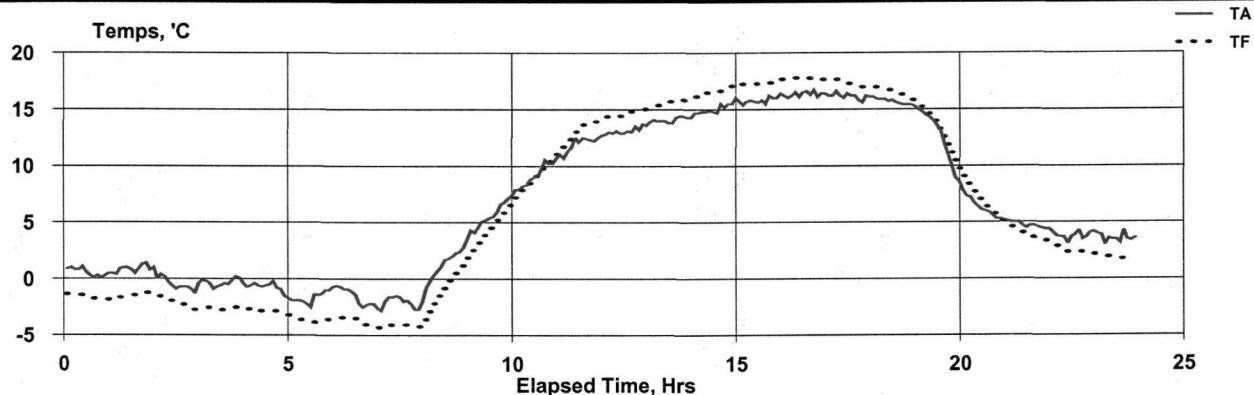
BGI PQ200 Air Sampling System

Downloaded 2012 23 mar 13:06:09

Job Details:				Job Code:				
Job Name: 12Mar23C.JOB				Site Name: 964C				
Version: 5.62				Station Code:				
Serial No: 964				Operators: KN				
Pump Time: 4894:28				User1:				
Flags:				User2:				
BP	Max 591	Min 588	Avg 589	Units mmHg	Timer Information:		Mass Concentration Data:	
TA	16.8	-2.9	6.7	°C	Date dd-mmm	Time hh:mm:ss	Filter ID: 16	
Q	---	---	16.71	Lpm	Start: 12-22-mar	0:00:08	Final Wt:	
QCV	0.58 %			Stop: 12-23-mar	0:00:05	Initial Wt:		
Max overheat 2.4 °C occured 22-mar 15:07:16				ET: 23:59		Delta Wt: 0.000 mg		
						Total Vol: 24.042 m³		
						Mass Conc: 0 µg/m³		

Notes 1:

Notes 2:



Hourly

12-22-mar	0:05:08	591	0.6	-1.6	-2.2	28	16.71
12-22-mar	1:05:08	591	0.9	-1.5	-2.4	28	16.71
12-22-mar	2:05:08	590	-0.5	-2.2	-1.7	28	16.72
12-22-mar	3:05:08	590	-0.3	-2.7	-2.3	28	16.72
12-22-mar	4:05:08	590	-0.8	-2.9	-2.1	28	16.71
12-22-mar	5:05:08	590	-1.6	-3.7	-2.1	28	16.71
12-22-mar	6:05:08	590	-1.6	-3.8	-2.1	28	16.72
12-22-mar	7:05:08	590	-2.1	-4.2	-2.2	28	16.71
12-22-mar	8:05:08	590	1.5	-0.8	-2.3	29	16.71
12-22-mar	9:05:08	590	5.7	4.4	-1.3	30	16.71
12-22-mar	10:05:08	590	9.2	9.0	-0.2	31	16.72
12-22-mar	11:05:08	590	12.0	13.0	1.0	31	16.71
12-22-mar	12:05:08	590	13.1	14.6	1.4	31	16.72
12-22-mar	13:05:08	590	14.1	15.6	1.5	32	16.71
12-22-mar	14:05:08	589	15.1	16.5	1.5	32	16.70
12-22-mar	15:05:08	589	15.8	17.3	1.5	32	16.71
12-22-mar	16:05:08	589	16.3	17.7	1.4	32	16.72
12-22-mar	17:05:08	589	16.1	17.3	1.1	32	16.71
12-22-mar	18:05:08	589	15.7	16.5	0.8	32	16.70
12-22-mar	19:05:08	589	12.5	13.1	0.7	32	16.71
12-22-mar	20:05:08	589	6.2	6.9	0.7	31	16.71
12-22-mar	21:05:08	590	4.7	3.9	-0.8	31	16.71
12-22-mar	22:05:08	590	3.8	2.4	-1.4	30	16.70
12-22-mar	23:05:08	590	3.6	1.8	-1.8	30	16.72

BGI PQ200 Air Sampling System

Downloaded 2012 29 mar 12:08:45

Job Details:		Job Code: Site Name: 964C Station Code: Operators: KN User1: User2:	
Job Name: 12Mar29C.JOB Version: 5.62 Serial No: 964 Pump Time: 4918:27 Flags:			
BP TA Q	Max 591 Min 588 Avg 589 Units mmHg	Timer Information: Date dd-mmm Start: 12-28-mar Time hh:mm:ss 0:00:08 Stop: 12-29-mar 0:00:04 ET: 23:59	Mass Concentration Data: Filter ID: 6 Final Wt: mg Initial Wt: mg Delta Wt: 0.000 mg Total Vol: 24.043 m ³ Mass Conc: 0 µg/m ³
QCV 0.57 % Max overheat 2.4 °C occured 28-mar 12:32:10			
Notes 1: Notes 2:			
<p>Temps, °C</p> <p>TA</p> <p>TF</p> <p>Elapsed Time, Hrs</p>			
<p>Overheat, TF - TA, °C</p> <p>Elapsed Time, Hrs</p>			
<p>SP, cmH2O</p> <p>Elapsed Time, Hrs</p>			

Hourly

12-28-mar	0:05:08	590	0.7	-0.8	-1.5	30	16.72
12-28-mar	1:05:08	590	0.7	-1.2	-1.8	31	16.71
12-28-mar	2:05:08	590	0.2	-1.3	-1.5	31	16.71
12-28-mar	3:05:08	590	0.0	-1.6	-1.6	31	16.71
12-28-mar	4:05:08	590	0.0	-1.5	-1.6	31	16.71
12-28-mar	5:05:08	590	-0.3	-1.8	-1.4	31	16.71
12-28-mar	6:05:08	590	-0.5	-2.0	-1.5	31	16.71
12-28-mar	7:05:08	590	0.0	-1.6	-1.6	31	16.71
12-28-mar	8:05:08	591	4.0	1.3	-2.7	31	16.71
12-28-mar	9:05:08	591	7.4	6.6	-0.8	33	16.71
12-28-mar	10:05:08	591	9.1	9.4	0.3	33	16.70
12-28-mar	11:05:08	590	10.4	11.6	1.2	34	16.71
12-28-mar	12:05:08	590	12.1	13.6	1.5	35	16.71
12-28-mar	13:05:08	590	13.5	14.7	1.2	35	16.71
12-28-mar	14:05:08	590	14.2	15.4	1.2	35	16.71
12-28-mar	15:05:08	589	14.0	15.2	1.3	35	16.72
12-28-mar	16:05:08	589	13.4	14.3	0.9	35	16.71
12-28-mar	17:05:08	589	12.9	13.5	0.6	35	16.71
12-28-mar	18:05:08	589	11.9	11.9	0.1	35	16.71
12-28-mar	19:05:08	589	10.3	10.0	-0.3	35	16.71
12-28-mar	20:05:08	590	8.5	7.9	-0.6	35	16.71
12-28-mar	21:05:08	590	8.2	7.2	-1.0	35	16.71
12-28-mar	22:05:08	590	5.8	5.3	-0.4	35	16.71
12-28-mar	23:05:08	590	3.9	3.1	-0.8	34	16.71

APPENDIX C

Precision and Single-Point Flow Rate Checks

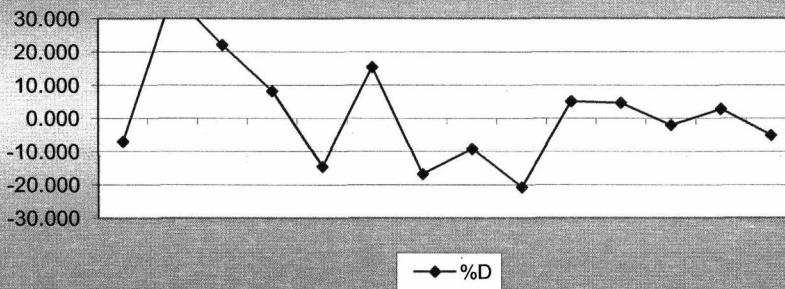
Precision Estimate (From Collocated Samples)

Site ID: Monitors 963B & 964C		Pollutant type:		CV _{ub} (%)			
Meas Val (Y)	Audit Val (X)	d (Eqn 10)	25th Percentile	d ²	d	d ²	
24.8	26.6	-7.004	-8.674	49.054	7.004	49.054	
20	13.7	37.389	75th Percentile	1397.917	37.389	1397.917	
40.3	32.3	22.039	7.362	485.698	22.039	485.698	n $\sum d $ $\sum d ^2$
5.1	4.7	8.163		66.639	8.163	66.639	14 170.805 3328.763
5.1	5.9	-14.545		211.570	14.545	211.570	n-1 $\sum d$ $\sum d^2$
8.4	7.2	15.385		236.686	15.385	236.686	13 19.414 3328.763
4.9	5.8	-16.822		282.994	16.822	282.994	
6.2	6.8	-9.231		85.207	9.231	85.207	
51.5	63.4	-20.714		429.056	20.714	429.056	
6.2	5.9	4.959		24.588	4.959	24.588	
9.1	8.7	4.494		20.199	4.494	20.199	
18.4	18.8	-2.151		4.625	2.151	4.625	
18.9	18.4	2.681		7.188	2.681	7.188	
74.5	78.5	-5.229		27.340	5.229	27.340	

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Percent Differences



One-Point Flow Rate Bias Estimate

Site ID: Monitor 962A		Pollutant type:		Bias (%)			
Meas Val (Y)	Audit Val (X)	d (Eqn. 1)	25th Percentile	d^2	d	$ d ^2$	
16.7	17.25	-3.188	-2.678	10.166	3.188	10.166	
16.7	17.07	-2.168	75th Percentile	4.698	2.168	4.698	
16.72	15.73	6.294		2.063	39.611	6.294	

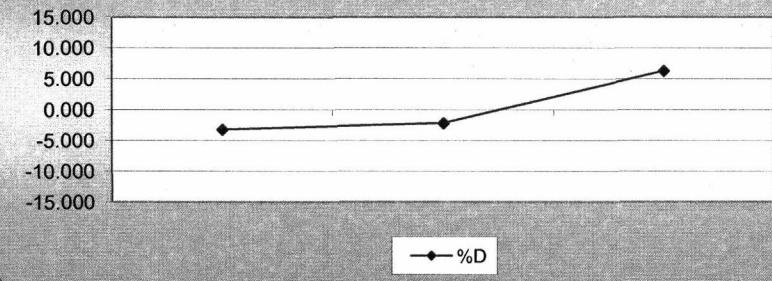
n	$\sum d $	"AB" (Eqn 4)
3	11.650	3.883
n-1	$\sum d ^2$	"AS" (Eqn 5)
2	54.475	2.149

Bias (%) (Eqn 3)	Both Signs Positive
7.51	FALSE
Signed Bias (%)	Both Signs Negative
+/-7.51	FALSE

[Return to Main Menu](#)

[Print Worksheet](#)

Percent Differences



One-Point Flow Rate Bias Estimate

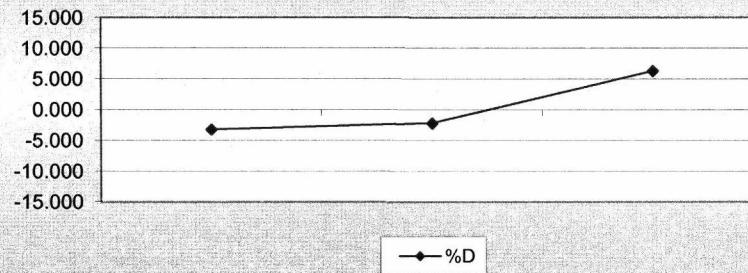
Site ID: Monitor 963B	Pollutant type:					Bias (%)
-----------------------	-----------------	--	--	--	--	----------

Meas Val (Y)	Audit Val (X)	d (Eqn. 1)	25th Percentile	d^2	d	$ d ^2$	
16.7	16.74	-0.239	-0.090	0.057	0.239	0.057	
16.7	16.69	0.060	75th Percentile	0.004	0.060	0.004	
16.7	16.3	2.454		1.257	6.022	2.454	6.022

n	$\sum d $	"AB" (Eqn 4)
3	2.753	0.918
n-1	$\sum d ^2$	"AS" (Eqn 5)
2	6.083	1.334

Bias (%) (Eqn 3)	Both Signs Positive
3.17	FALSE
Signed Bias (%)	Both Signs Negative
+/-3.17	FALSE

Percent Differences

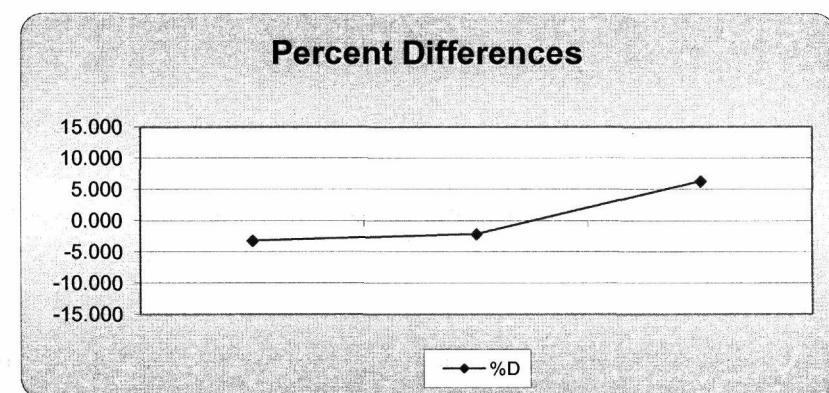


One-Point Flow Rate Bias Estimate

Site ID: Monitor 964C	Pollutant type:	Bias (%)					
Meas Val (Y)	Audit Val (X)	d (Eqn. 1)	25th Percentile	d ²	d	d ²	
16.7	16.75	-0.299	-0.535	0.089	0.299	0.089	
16.72	16.85	-0.772	75th Percentile	0.595	0.772	0.595	
16.7	15.9	5.031		2.366	25.315	5.031	25.315

n	$\sum d $	"AB" (Eqn 4)
3	6.101	2.034
n-1	$\sum d ^2$	"AS" (Eqn 5)
2	26.000	2.607

Bias (%) (Eqn 3)	Both Signs Positive
6.43	FALSE
Signed Bias (%)	Both Signs Negative
+/-6.43	FALSE



APPENDIX D

Field Data Sheets

Background Monitor 962A

Table I - Every 6th Day Sampling

Date	Time	Displayed Date	Displayed Time	Collected Filter ID#	New Filter ID#	Sample Start Time	Sample Start Date	Sampler Initials
1-5-12	12:52	1-5-12	12:49	7				KN
1-9-12	12:05	1-9-12	12:01		18	M-M	1-10-12	KN
1-11-12	9:56	1-11-12	9:52	18	21	M-M	1-16-12	KN
1-18-12	13:34	1-18-12	13:34	21	27	M-M	1-22-12	KN/JESR
1-23-12	9:57	1-23-12	9:53	27	24	M-M	1-28-12	KN
1-30-12	10:27	1-30-12	10:27	24	6	M-M	2-03-12	KN/JESR
2/6/12	10:20	2/6/12	10:20	6	7	M-M	2-7-12	KN
2/11/12	9:08	2/11/12	9:03	7	11	M-M	2-15-12	KAI
2/17/12	10:17	2/17/12	10:13	11	14	M-M	2-21-12	KN
2/24/12	12:00	2/24/12	11:55am	11	4	M-M	2-27-12	KN
2/28/12	11:25am	2/28/12	11:25am	4	7	M-M	3-4-12	JKS
3/5/12	2:43pm	3/5/12	14:38pm	-	7	M-M	3-10-12	KN
3/12/12	10:09am	3/12/12	9:08am	7	11	M-M	3-16-12	KN
3/19/12	10:14am	3/19/12	10:14am	11	14	M-M	3-23-12	KAI
3/26/12	12:42pm	3/26/12	12:41pm	14	4	M-M	3-28-12	KN
3/29/12	11:26am	3/29/12	11:26am	51	7	M-M	4-3-12	KN
4/5/12	12:41pm	4/5/12	12:40pm	7	11	M-M	4-9-12	KN

Programmed for 3/8/12
Changed time for day

Table II - Monthly Leak Test

Date	Time	Initial SP Value	Final SP Value	Pass/Fail	Initials
1/5/12	12:59	103	102	Pass	KN
2/2/12	12:22	101	100	Pass	KN
3/29/12	11:29am	98	97	Pass	KAI

Table III - Monthly Flow Rate Verification

Date	Time	Monitor Flow (Q Lpm)	Monitor Baro Pressure (mmHg)	Delta Cal Baro Pressure (mmHg)	Monitor Temp (A)	Delta Cal Temp (Ta)	Delta Cal Flow (Qs)	Delta Cal Flow (Qa)	Accuracy	Initials
1/5/12	11:04	16.70	588	590	11.5°	12.3	13.97	17.25	-3.19	KN
2/2/12	17:24	16.70	580	582	-0.3	0.2	14.24	17.07	-2.17	KN
3/29/12	11:33am	16.72	584	587	11.0	11.6	12.71	15.73	6.29	KN

Compliance Monitor 963B

Table I - Every 6th Day Sampling

Date	Time	Displayed Date	Displayed Time	Collected Filter ID#	New Filter ID#	Sample Start Time	Sample Start Date	Sampler Initials
1-5-12	1:33pm	1-5-12	13:31	8				KAI
1-9-12	12:22	1-9-12	12:20		19	M-M	1-10-12	KAY
1-11-12	10:55	1-11-12	10:52	19	22	M-M	1-16-12	KAY
1-18-12	14:08	1-18-12	14:08	22	28	M-M	1-22-12	KN/JKSA
1-23-12	10:41	1-23-12	10:38	28	25	M-M	1-28-12	KAY
1-30-12	10:11	1-30-12	10:10	25	04	M-M	2-03-12	JAU/JKSA
2-6-12	12:45	2-6-12	12:42	4	8	M-M	2-9-12	KN
2-11-12	9:35	2-11-12	9:32	8	12	M-M	2-15-12	KN
2-17-12	10:52	2-17-12	10:48	12	15	M-M	2-21-12	KN
2-24-12	12:33	2-24-12	12:29	15	5	M-M	2-27-12	KN
2-28-12	11:50am	2-28-12	11:50am	5	8	M-M	3-4-12	KAY
3-5-12	3:23pm	3-5-12	15:19pm	8	10	M-M	3-10-12	KN
3/12/12	10:38am	3-12-12	9:34pm	10	12	M-M	3-16-12	KN
3/19/12	10:49am	3/19/12	10:48am	12	15	M-M	3-22-12	KAY
3/23/12	1:09pm	3/23/12	13:08	15	5	M-M	3-28-12	KAY
3/29/12	12:13pm	3/29/12	12:12	5	8	M-M	4-3-12	KN
4/5/12	1:38pm	4/5/12	13:12	8	12	M-M	4-9-12	KN

Table II - Monthly Leak Test

Date	Time	Initial SP Value	Final SP Value	Pass/Fail	Initials
1-5-12	11:56pm	97	97	Pass	KA
2-2-12	12:50	95	94	Pass	KN
3-29-12	12:14	98	98	Pass	KA

Table III - Monthly Flow Rate Verification

Date	Time	Monitor Flow (Q Lpm)	Monitor Baro Pressure (mmHg)	Delta Cal Baro Pressure (mmHg)	Monitor Temp (A)	Delta Cal Temp (Ta)	Delta Cal Flow (Qs)	Delta Cal Flow (Qa)	Accuracy	Initials
1-5-12	1:58 pm	16.70	594	596	12.9	13.0	13.65	16.74	-0.24	KN
2/2/12	12:55	16.70	586	588	0.5	1.2	14.00	16.69	6.06	KW
3/24/12	12:24	16.70	591	593	13.3	14.0	13.21	16.30	7.45	KM

R/RJ

Co-located Monitor 964C

Table I - Every 6th Day Sampling

Date	Time	Displayed Date	Displayed Time	Collected Filter ID#	New Filter ID#	Sample Start Time	Sample Start Date	Sampler Initials
1-5-12	12:10	1-5-12	14:	9				KN
1-9-12	12:25	1-9-12	12:23		20	M-M	1-10-12	KN
1-11-12	11:05	1-11-12	11:23	20	23	M-M	1-16-12	KN
1-18-12	14:11	1-18-12	14:11	23	29	M-M	1-22-12	KN/JKSR
1-23-12	10:44	1-23-12	10:42	29	26	M-M	1-28-12	KN
1-30-12	10:07	1-30-12	10:07	26	15	M-M	2-03-12	KN/JKSR
2-6-12	12:49	2-6-12	12:46	5	9	M-M	2-9-12	KN
2-11-12	9:41am	2-11-12	9:37am	9	13	M-M	2-15-12	KN
2-17-12	10:56am	2-17-12	10:57am	13	16	M-M	2-21-12	KN
2-24-12	12:37	2-24-12	12:37am	16	6	M-M	2-27-12	KN
2-28-12	11:56am	2-28-12	11:56AM	6	9	M-M	3-4-12	JKSR
3-5-12	3:26pm	3-5-12	15:21pm	9	18	M-M	3-10-12	KN
3-12-12	10:44am	3/12/12	9:40 am	18	13	M-M	3/16/12	KN
3-19-12	10:53am	3/19/12	10:53am	13	16	M-M	3/20/12	KN
3-23-12	11:16pm	3/23/12	13:16pm	16	6	M-M	3/28/12	KN
3-30-12	11:21pm	3/30/12	12:21pm	6	9	M-M	4/3/12	KN
4-5-12	11:17pm	4/5/12	13:17pm	9	13	M-M	4/9/12	KN

changed Time

Table II - Monthly Leak Test

Date	Time	Initial SP Value	Final SP Value	Pass/Fail	Initials
1-5-12	2:13	106	105	Pass	KN
2-2-12	12:58	98	97	Pass	KN
3/29/12	12:35	99	98	Pass	KN

Table III - Monthly Flow Rate Verification

Date	Time	Monitor Flow (Q Lpm)	Monitor Baro Pressure (mmHg)	Delta Cal Baro Pressure (mmHg)	Monitor Temp (A)	Delta Cal Temp (Ta)	Delta Cal Flow (Qs)	Delta Cal Flow (Qa)	Accuracy	Initials
1-5-12	2:16	16.70	594	595	12.6	13.2	13.66	16.75	-0.30	KN
2-2-12	1:05	16.72	587	588	1.2	1.6	14.12	16.85	-0.77	KN
3-29-12	12:39	16.70	591	593	13.3	13.2	13.55	15.90	-5.03	KN

APPENDIX E

Independent PM₁₀ Sampler Performance Audit Report



AUDIT REPORT FOR
ALTON COAL DEVELOPMENT MONITORING PROJECT
ALTON, UTAH
SECOND QUARTER 2012

Prepared by

AIR RESOURCE SPECIALISTS, INC.
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May 3, 2012

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1.0 AUDIT SUMMARY

Alton Coal Development is operating three Federal Reference Method (FRM) PM₁₀ particulate samplers and a meteorological station at the Coal Hollow Mine near Alton, Utah. The PM₁₀ samplers used are Model PQ200, manufactured by BGI.

Air Resources Specialists, Inc. (ARS) conducted a performance audit of the monitoring systems on April 11, 2012. Guidance from the following EPA documents was used to establish the audit procedures:

- 40 CFR 58, Appendix A. *Quality Assurance Requirements for SLAMS, SPMs, and PSD Air Monitoring*
- EPA *Quality Assurance Handbook for Air Pollution Measurement Systems*:
 - *Volume I. A Field Guide to Environmental Quality Assurance*
 - *Volume II. Ambient Air Quality Monitoring Program*

At the time of the audit, all three FRM particulate samplers were operating within EPA and project accuracy goals. Ambient air quality audit results are summarized by parameter in Table 1-1.

Table 1-1
Summary of Ambient Air Quality Audit Results

Parameter	Instrument/Analyzer	Within Accuracy Goal
Particulate Sampler		
PM ₁₀	BGI PQ200 – Background	Yes
PM ₁₀	BGI PQ200 – East Collocated	Yes
PM ₁₀	BGI PQ200 – West Collocated	Yes

Details of the audit are presented in the following sections:

- | | |
|-------------|--------------------------------|
| Section 2.0 | Audit Methods |
| Section 3.0 | Audit Equipment |
| Section 4.0 | Audit Results |
| Appendix A | Audit Data Sheets |
| Appendix B | Audit Standards Certifications |

Any questions related to this audit or audit report should be addressed to:

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Fort Collins, Colorado 80525
Telephone: 970-484-7941
Fax: 970-484-3423
E-mail: mslate@air-resource.com

2.0 AUDIT METHODS

Audit procedures, audit challenge ranges and acceptance criteria are described below. These ranges and limits exceed or conform to the Alton Coal Quality Assurance Project Plan prepared by JBR. Audit results were verbally communicated to the Alton Coal Development Environmental Manager prior to departure from the site. Audit data forms are provided in Appendix A.

2.1 PARTICULATE SAMPLERS

Three volumetric flow FRM PM₁₀ particulate samplers were audited. ARS audited the sampler with a deltaCal instrument that measures flow, ambient temperature, and barometric pressure. After conducting the flow audit, a system leak check was performed. During a leak check, the Model PQ200 FRM sampler will not measure flow rate; therefore, a change in vacuum over a two-minute period is used to identify a leak. The instrument manufacturer states in the operation manual that a measurement of ≥ 5 cm of water in a two-minute period is considered a leak. This value will be used to identify whether or not a leak is present. The observed volumetric operational flow and design flow of the sampler were compared to the audit flows measured by the ARS deltaCal. Differences between the operational sampler flow and audit flow above $\pm 4\%$ are considered out of tolerance. Differences between the designated design flow and the audit flow greater than $\pm 5\%$ are considered out of tolerance, as indicated in 40 CFR Part 58 Appendix A. In addition to the flow audits, the FRM's observed ambient temperature and barometric pressure sensors were also audited by comparison to the deltaCal values. A temperature difference greater than $\pm 2.0^{\circ}\text{C}$ and a barometric pressure difference greater than $\pm 10\text{mm Hg}$ are considered out of tolerance. Audit methods and acceptable criteria for the particulate samplers are summarized in Table 2-1.

Table 2-1

FRM PM₁₀ Particulate Samplers Audit Methods and Acceptance Criteria

Parameter	Audit Method	Acceptance Criteria
Leak Check	Change in vacuum of closed inlet in 2 minutes	$< 5 \text{ cm H}_2\text{O in 2 min}^*$
Actual Volumetric Sampler Flow	DeltaCal audit flow to actual sampler flow (volumetric)	$\leq \pm 4\%$
Designated Design Flow	Designated design flow to audit flow (volumetric)	$\leq \pm 5\%$
Ambient Temperature ($^{\circ}\text{C}$)	Audit temperature to sampler temperature	$\leq \pm 2^{\circ}\text{C}$
Barometric Pressure (mm Hg)	Audit barometric pressure to sampler pressure	$\leq \pm 10\text{mm Hg}$

*As suggested by the manufacturer.

3.0 AUDIT EQUIPMENT

All audit equipment and reference standards were in current calibration and traceable to the NIST or other authoritative references. Table 3-1 lists the specific audit equipment used and recertification dates. Copies of standards certifications for the equipment used in the audit are provided in Appendix B.

Table 3-1
Audit Equipment

References	Manufacturer	Model Number	Serial Number	Recertification Date
FRM Audit	BGI	deltaCal	923	12/14/12

4.0 AUDIT RESULTS

Detailed Alton Coal Development monitoring system audit results for the particulate samplers are shown in Tables 4-1 through 4-3. Audit findings and recommendations are discussed below.

4.1 AUDIT FINDINGS

Performance Audit Results

- All three PM₁₀ samplers were operating within project accuracy goals.

System Audit Results

- The meteorological station was not audited during this visit.

Table 4-1
Summary of Audit Findings
Background FRM Sampler
Alton Coal Development
Alton, Utah
April 11, 2012

Parameter	Manufacturer	Instrument Serial No.	Designated Audit Value	Sampler Observed	Accuracy Goal (\pm)	Difference	Within Accuracy Goal
FRM PM₁₀	BGI	PQ200S-N962A					
Lk Ck External			95.0	95.0	15.0	0.0	Y
Flow (Volumetric)			16.7	16.7	5.0	0.1	Y
Flow (Design)			16.7	16.7	4.0	0.1	Y
Ambient Temperature			10.2	9.9	2.0	-0.3	Y
Filter Temperature			12.0	11.8	2.0	-0.2	Y
Ambient Pressure			581.0	579.0	10.0	-2.0	Y

* PM10 measurement quality objectives were taken from CFR Part 58 Appendix A, Section 10.2.
*Leak check accuracy goals are based on < 5 cm vacuum drop in two minutes, as suggested by manufacturer.

Table 4-2
Summary of Audit Findings
East Collocated FRM Sampler
Alton Coal Development
Alton, Utah
April 11, 2012

Parameter	Manufacturer	Instrument Serial No.	Designated Audit Value	Sampler Observed	Accuracy Goal (\pm)	Difference	Within Accuracy Goal
FRM PM₁₀	BGI	PQ200S-N962A					
Lk Ck External			101.0	101.0	15.0	0.0	Y
Flow (Volumetric)			16.7	16.7	5.0	0.1	Y
Flow (Design)			16.7	16.7	4.0	0.0	Y
Ambient Temperature			9.7	9.3	2.0	-0.4	Y
Filter Temperature			9.0	9.3	2.0	0.3	Y
Ambient Pressure			587.0	586.0	10.0	-1.0	Y

* PM10 measurement quality objectives were taken from CFR Part 58 Appendix A, Section 10.2.
 *Leak check accuracy goals are based on < 5 cm vacuum drop in two minutes, as suggested by manufacturer.

Table 4-3
Summary of Audit Findings
West Collocated FRM Sampler
Alton Coal Development
Alton, Utah
April 11, 2012

Parameter	Manufacturer	Instrument Serial No.	Designated Audit Value	Sampler Observed	Accuracy Goal (\pm)	Difference	Within Accuracy Goal
FRM PM₁₀	BGI	PQ200S-N962A					
Lk Ck External			96.0	95.0	5.0	0.0	Y
Flow (Volumetric)			17.1	16.7	5.0	-2.1	Y
Flow (Design)			16.7	16.7	4.0	-0.2	Y
Ambient Temperature			10.7	11.0	2.0	0.3	Y
Filter Temperature			11.3	10.9	2.0	-0.4	Y
Ambient Pressure			587.0	586.0	10.0	-1.0	Y

* PM10 measurement quality objectives were taken from CFR Part 58 Appendix A, Section 10.2.
 *Leak check accuracy goals are based on < 5 cm vacuum drop in two minutes, as suggested by manufacturer.

APPENDIX A
Audit Data Sheets

FRM PM_{2.5} Monitor Audit

Date: 4/11/2012 Network: Alton Coal Site: Background Site Auditor: M. Slate
 Manufacturer: BGI Model: PQ200 S/N: PQ200S-N962A

Audit Standards					
Flow Standard	Model BGI Delta Cal	S/N	923	Cal. Date	12/14/2011
Temperature Std.	Model BGI Delta Cal	S/N	923	Cal. Date	12/14/2011
BP Standard	Model BGI Delta Cal	S/N	923	Cal. Date	12/14/2011

Leak Check*			
	Start Vacuum	End Vacuum	Difference
Lk Ck Ext (<5.0")	95.0	95.0	0

Flow Audit lpm			
Reference/Std	FRM Observed	% Difference	
Flow (Volumetric)	16.69	16.7	0.1
Flow (Design)	16.70	16.72	0.1

Temperature °C			
	Reference/Std	FRM Observed	Difference
Ambient Temperature	10.2	9.9	-0.3
Filter Temperature	12	11.8	-0.2

Barometric Pressure mmHg			
	Reference/Std	FRM Observed	Difference
Ambient Pressure	581	579	-2

FRM PM_{2.5} Monitor Audit

Date: 4/11/2012 Network: Alton Coal Site: East Collocated Auditor: M. Slate
 Manufacturer: BGI Model: PQ200 S/N: PQ200-N964C

Audit Standards					
Flow Standard	Model BGI Delta Cal	S/N	923	Cal. Date	12/14/2011
Temperature Std.	Model BGI Delta Cal	S/N	923	Cal. Date	12/14/2011
BP Standard	Model BGI Delta Cal	S/N	923	Cal. Date	12/14/2011

Leak Check*			
	Start Vacuum	End Vacuum	Difference
Lk Ck Ext. (<5.0")	101.0	101.0	0

Flow Audit lpm			
	Reference/Std	FRM Observed	% Difference
Flow (Volumetric)	16.68	16.7	0.1
Flow (Design)	16.70	16.70	0.0

Temperature °C			
	Reference/Std	FRM Observed	Difference
Ambient Temperature	9.7	9.3	-0.4
Filter Temperature	9	9.3	0.3

Barometric Pressure mmHg			
	Reference/Std	FRM Observed	Difference
Ambient Pressure	587	586	-1

FRM PM_{2.5} Monitor Audit

Date: 4/11/2012 Network: Alton Coal Site: West Collocated Auditor: M. Slate
 Manufacturer: BGI Model: PQ200 S/N: PQ200-N963B

Audit Standards					
Flow Standard	Model BGI Delta Cal	S/N	923	Cal. Date	12/14/2011
Temperature Std.	Model BGI Delta Cal	S/N	923	Cal. Date	12/14/2011
BP Standard	Model BGI Delta Cal	S/N	923	Cal. Date	12/14/2011

Leak Check*			
	Start Vacuum	End Vacuum	Difference
Lk Ck Ext (<5.0")	96.0	95.0	-1

Flow Audit lpm			
Reference/Std	FRM Observed	% Difference	
Flow (Volumetric)	17.06	16.7	-2.1
Flow (Design)	16.70	16.67	-0.2

Temperature °C			
	Reference/Std	FRM Observed	Difference
Ambient Temperature	10.7	11	0.3
Filter Temperature	11.3	10.9	-0.4

Barometric Pressure mmHg			
	Reference/Std	FRM Observed	Difference
Ambient Pressure	587	586	-1

APPENDIX B

Audit Standards Certifications

BGI INCORPORATED 58 GUINAN STREET WALTHAM, MA 02451
NIST Traceable Calibration Facility, ISO 9001:2008 Registered



CERTIFICATE OF CALIBRATION - NIST TRACEABILITY

(Refer to instruction manual for further details of calibration)

deltaCal Serial Number: 000923

DATE: 14-Dec-11

Calibration Operator: Brian DeVoe

Critical Venturi Flow Meter: Max Uncertainty = 0.346%

Serial Number: 1 CEEST NVLAP NIST Data File 01BGI002

Serial Number: 2 CEEST NVLAP NIST Data File 01BGI003

Serial Number: 4 CEEST NVLAP NIST Data File 02BGI004

Room Temperature : Uncertainty = 0.071% Room Temperature: 22.6 C

Brand: Ever-Safe **Serial Number:** 246667

NIST Traceability No. 516837

deltaCal:

Ambient Temperature (set): 22.6 C

Aux (filter) Temperature (set): 22.6 C

Barometric Pressure and Absolute Pressure

Vaisala Model PTB330(50-1100) Digital Accuracy: 0.03371%

S/N C4310002

NIST Traceable (Primo Primary Standard Model 453 S/N W12537) Certificate No. P-7485

deltaCal:

Barometric Pressure (set): 770 mm of Hg

Results of Venturi Calibration

Flow Rate (Q) vs. Pressure Drop (ΔP).

Where: Q=Lpm, ΔP = cm of H₂O

$$Q = 3.85075 \Delta P^{0.52304}$$

Overall Uncertainty: 0.35%

Date Placed In Service 1/10/2012

(To be filled in by operator upon receipt)

Recommended Recalibration Date 1/10/2013

(12 months from date placed in service)

Revised: June 2008